Product Data Sheet
00813-0100-4801, Rev LA
October 2008

Rosemount 3051S Series of Instrumentation
Scalable Pressure, Flow, and Level Solutions

- *Industry leading performance with 0.025% accuracy*
- *Industry's first %-of-reading flow transmitter delivering a 10x performance improvement*
- *Industry's first installed 10-year stability*
- *Unprecedented reliability backed by a 12-year limited warranty*
- *Scalable SuperModule® Platform provides a foundation for integrated pressure, flow, and level solutions*
- *WirelessHART™ capabilities extend the full benefits of PlantWeb® to previously inaccessible locations*
- *Scalable MultiVariable™ Transmitter enables pressure, temperature, and fully compensated mass and energy flow*
- *Advanced Diagnostics provide process insight to prevent abnormal situations and increase plant productivity*
- *Safety Certified to IEC 61508*

Contents

Success Through Innovative Measurement

Industry Leading Performance with 0.025% Accuracy

The Rosemount 3051S delivers cutting edge performance beginning with the SuperModule Platform. Among the many advances, Saturn™ sensing technology incorporates a secondary sensor to optimize performance and expand diagnostic capabilities.

Industry's First %-of-reading Flow Transmitter

Innovative design combined with patent-pending manufacturing techniques deliver a 10x performance improvement and a wide flow turndown with the Ultra for Flow performance class.

Industry's First Installed 10-year Stability

Stability begins with the all-welded, 316L SST hermetically sealed SuperModule Platform that houses a single electronics board to eliminate moisture and field contaminant effects. See "Long Term Stability" on page 8 for details.

Unprecedented Reliability Backed by a 12-year Limited Warranty

Further enhance installation practices and advanced diagnostic capabilities with the most reliable platform supported by a 12-year limited warranty. See “Warranty” on page 9 for details.

Safety Certified to IEC 61508

The 3051S is certified to IEC 61508 for non-redundant use in SIL 1 and SIL 2 Safety Instrumented Systems and redundant use in SIL 3 Safety Instrumented Systems.

Scalable SuperModule Platform

The 3051S powers the PlantWeb architecture by delivering the industry’s best field intelligence with advanced diagnostics for HART® and FOUNDATION™ fieldbus. The Scalable SuperModule Platform provides a foundation for integrated pressure, flow, and level solutions. It allows you to customize performance, functionality, diagnostics, and process connections for your expanding application requirements.

Scalable MultiVariable Capabilities

The Rosemount 3051S MultiVariable Transmitter is the latest enhancement to Emerson’s flow offering providing superior calculations including fully compensated mass, energy, and totalized flow. Users can customize a measurement solution for direct variable measurement in any combination of differential pressure, static pressure, and process temperature.

Advanced Diagnostics

The 3051S ASP™ Diagnostics Suite includes Statistical Process Monitoring (SPM), variable logging with time stamp capabilities, and advanced process alerts. These capabilities provide new process insight to prevent abnormal situations.

WirelessHART Capabilities

The Rosemount 3051S Wireless Series of Instrumentation can optimize your facility by providing access to previously cost-prohibitive information. Built on the SuperModule Platform of wired 3051S, these solutions provide proven 3051S performance, reliability and stability.

Rosemount Pressure Solutions

Rosemount 3051S Series of Instrumentation
Highest performing scalable pressure, flow and level measurement solutions drive better plant efficiency and more productivity. Innovative features include wireless, advanced diagnostics, and multivariable technologies.

Rosemount 305, 306 and 304 Manifolds
Factory-assembled, calibrated and seal-tested transmitter-to-manifold assemblies reduce installation costs.

Rosemount 1199 Diaphragm Seals
Provides reliable, remote measurements of process pressure and protects the transmitter from hot, corrosive, or viscous fluids.

Orifice Plate Primary Element Systems: Rosemount 1495 and 1595 Orifice Plates, 1496 Flange Unions and 1497 Meter Sections
A comprehensive offering of orifice plates, flange unions and meter sections that are easy to specify and order. The 1595 Conditioning Orifice provides superior performance in tight fit applications.

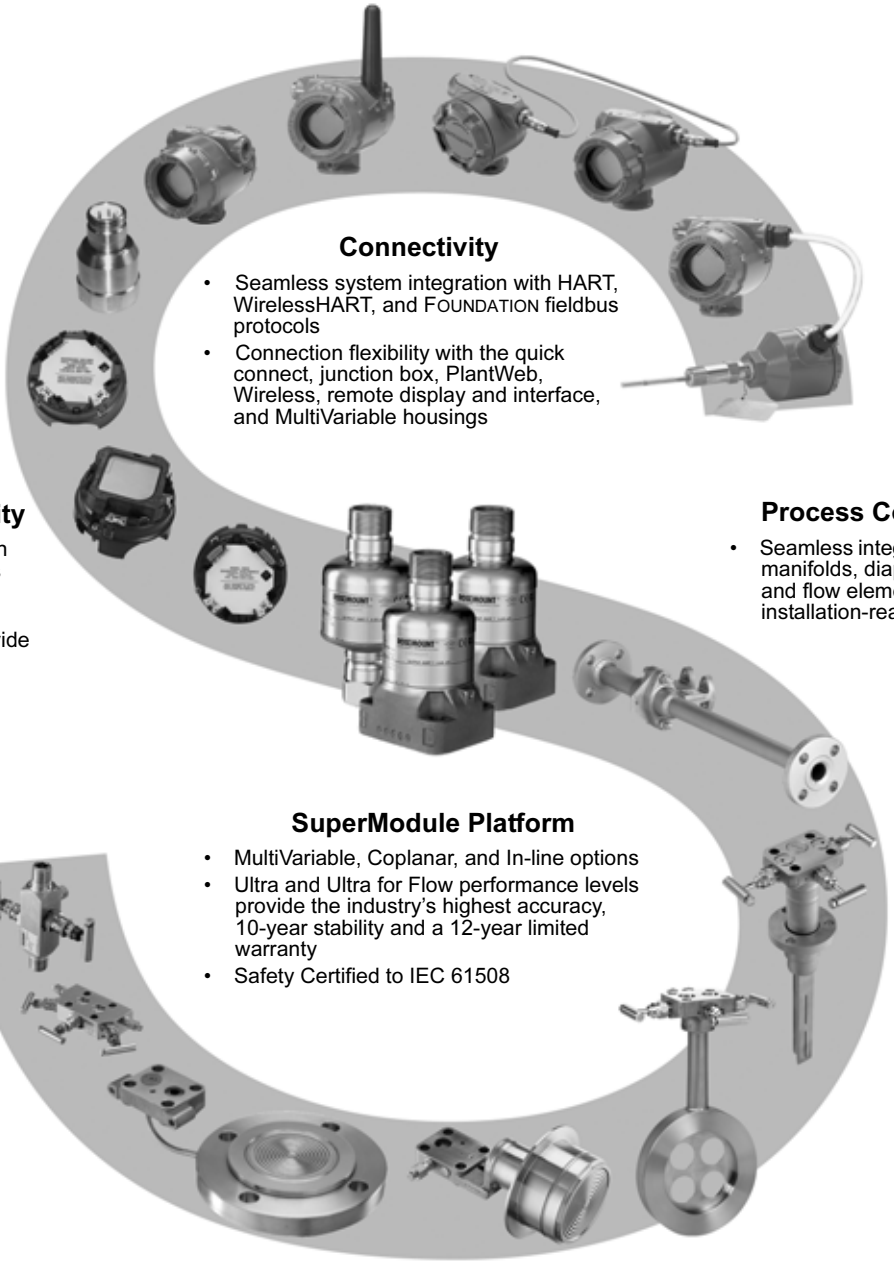
Rosemount 3051SFA Annubar® Flowmeters and Rosemount 485 Annubar Flowmeter Series
The state-of-the-art, fifth generation Rosemount 485 Annubar combined with the Rosemount MultiVariable transmitter technology creates an accurate, repeatable and dependable insertion-type flowmeter.

Rosemount 3051SFC Compact Orifice Flowmeters and Rosemount 405 Compact Orifice Flowmeter Series
Compact Orifice Flowmeters can be installed between existing flanges, up to a Class 600 (PN100) rating. A conditioning orifice plate version offers installation in tight fit applications requiring only two diameters of straight run upstream after a flow disturbance.

Rosemount 3051SFP Integral Orifice Flowmeters and Rosemount 1195 Integral Orifice Flowmeter Series
These integral orifice flowmeters eliminate the inaccuracies that become more pronounced in small orifice line installations. The completely assembled, ready to install flowmeters reduce cost and simplify installation.

Success Begins with an Innovative Scalable Platform

The Rosemount 3051S Series of Instrumentation is the world's first scalable device that provides a foundation for integrated pressure, flow, and level solutions. It allows you to customize performance, functionality, diagnostics, and process connections for your application. With the latest innovations in Wireless, MultiVariable, and Advanced Diagnostics technologies, the 3051S can help improve efficiency and productivity in your facility.



Connectivity

- Seamless system integration with HART, WirelessHART, and FOUNDATION fieldbus protocols
- Connection flexibility with the quick connect, junction box, PlantWeb, Wireless, remote display and interface, and MultiVariable housings

PlantWeb Functionality

- MultiVariable compensation with advanced calculations including mass, energy, or actual volumetric flow
- Advanced Diagnostics provide process insight to prevent abnormal situations

Process Connections

- Seamless integration of flanges, manifolds, diaphragm seals, and flow elements into a single, installation-ready solution

SuperModule Platform

- MultiVariable, Coplanar, and In-line options
- Ultra and Ultra for Flow performance levels provide the industry's highest accuracy, 10-year stability and a 12-year limited warranty
- Safety Certified to IEC 61508

Rosemount 3051S Scalable Products

Rosemount 3051S MultiVariable Transmitter

See ordering information on page 39.

- Performance up to ±0.65% flow accuracy over 14:1 flow turndown
- Mass, energy, actual volumetric, and totalized flow outputs
- Differential pressure, gage or absolute pressure, and process temperature measurements
- Available 10-year stability and 12-year limited warranty
- Coplanar platform enables integrated manifold, primary element, and diaphragm seal solutions
- 316L SST, Alloy C-276, Alloy 400, Tantalum, gold-plated Alloy 400, or gold-plated 316L SST process isolators

Rosemount 3051S Coplanar Differential, Gage, or Absolute Transmitter

See ordering information on page 43.

- Performance up to ±0.025% accuracy and 200:1 rangedown
- Available 10-year stability and 12-year limited warranty
- Coplanar platform enables integrated manifold, primary element, and diaphragm seal solutions
- Calibrated spans from 0.1 inH_2O to 4000 psi (0,25 mbar to 276 bar)
- 316L SST, Alloy C-276, Alloy 400, Tantalum, gold-plated Alloy 400, or gold-plated 316L SST process isolators

Rosemount 3051S In-Line Gage or Absolute Transmitter

See ordering information on page 48.

- Performance up to ±0.025% accuracy and 200:1 rangedown
- Available 10-year stability and 12-year limited warranty
- Calibrated spans from 0.3 to 10000 psi (20,7 mbar to 689 bar)
- Multiple process connections available
- 316L SST and Alloy C-276 process isolators

Rosemount 3051S Liquid Level Transmitter

See ordering information on page 52.

- Performance up to ±0.065% accuracy and 100:1 rangedown
- Welded fill fluid system provides best-in-class system reliability
- Flush, 2-in. (50 mm), 4-in. (100 mm), and 6-in. (150 mm) extended diaphragms
- Multiple fill fluids and wetted materials available
- Level and volume units, process alerts

Rosemount 3051SF Flowmeters

- Flowmeter platforms leverage innovative primary element designs
- Arrives leak-tested, calibrated, and ready-to-install
- Flow units, process alerts, and low flow cut-off
- % of reading performance over 14:1 flow turndown
- Mass, energy, actual volumetric, and totalized flow outputs
- Differential pressure, gage or absolute pressure, and process temperature measurements

Rosemount 3051SFP
Integral Orifice Flowmeter
See document 00813-0100-4686

Rosemount 3051SFA
Annubar Flowmeter
See document 00813-0100-4809

Rosemount 3051SFC
Compact Orifice Flowmeter
See document 00813-0100-4810

Specifications

PERFORMANCE SPECIFICATIONS

For zero-based spans, reference conditions, silicone oil fill, glass-filled PTFE o-rings, SST materials, Coplanar flange (3051SMV, 3051S_C) or 1/2 in.- 14 NPT (3051S_T) process connections, digital trim values set to equal range points.

Conformance to Specification (±3σ (Sigma))

Technology leadership, advanced manufacturing techniques, and statistical process control ensure measurement specification conformance to ±3σ or better.

Digital Output

For FOUNDATION™ fieldbus and wireless devices, use calibrated range in place of span.

Reference Accuracy[1]

Models	Classic MV	Ultra for Flow
3051SMV_ _1: Differential Pressure, Static Pressure, & Temperature **3051SMV_ _2: Differential Pressure & Static Pressure**		
DP Ranges 2 - 3	±0.04% of span; For spans less than 10:1, $\pm\left[0.01 + 0.004\left(\frac{URL}{span}\right)\right]$% of span	±0.04% of reading up to 8:1 DP turndown from URL; ±[0.04 + 0.0023 (URL/RDG[3])]% reading to 200:1 DP turndown from URL[4]
DP Range 1	±0.10% of span; For spans less than 15:1, $\pm\left[0.025 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	N/A
AP and GP Ranges 3 - 4	±0.055% of span; For spans less than 10:1, $\pm\left[0.0065\left(\frac{URL}{span}\right)\right]$% of span	±0.025% of span; For spans less than 10:1, $\pm\left[0.004\left(\frac{URL}{span}\right)\right]$% of span
Process Temp. RTD Interface[2]	±0.67 °F (0.37 °C)	±0.67 °F (0.37 °C)

Models	Ultra	Classic	Ultra for Flow
3051SMV_ _3: Differential Pressure & Temperature **3051SMV_ _4: Differential Pressure**			
Ranges 2 - 4	±0.025% of span; For spans less than 10:1, $\pm\left[0.005 + 0.0035\left(\frac{URL}{span}\right)\right]$% of span	±0.055% of span; For spans less than 10:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	±0.04% of reading up to 8:1 DP turndown from URL; ±[0.04 + 0.0023 (URL/RDG[3])]% reading to 200:1 DP turndown from URL[4]
Range 5	±0.05% of span; For spans less than 10:1, $\pm\left[0.005 + 0.0045\left(\frac{URL}{span}\right)\right]$% of span	±0.065% of span; For spans less than 10:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	N/A
Range 1	±0.09% of span; For spans less than 15:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	±0.10% of span; For spans less than 15:1, $\pm\left[0.025 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	N/A
Range 0	±0.09% of span; For spans less than 2:1, ±0.045% of URL	±0.10% of span; For spans less than 2:1, ±0.05% of URL	N/A
Process Temp. RTD Interface[2]	±0.67 °F (0.37 °C)	±0.67 °F (0.37 °C)	±0.67 °F (0.37 °C)

Reference Accuracy (continued)

Models	Ultra	Classic	Ultra for Flow
3051S_CD: Coplanar Differential Pressure **3051S_CG: Coplanar Gage Pressure**			
Ranges 2 - 4	±0.025% of span; For spans less than 10:1, $\pm\left[0.005 + 0.0035\left(\frac{URL}{span}\right)\right]$% of span	±0.055% of span; For spans less than 10:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	±0.04% of reading up to 8:1 DP turndown from URL; ±[0.04 + 0.0023 (URL/RDG(3))]% reading to 200:1 DP turndown from URL(4)
Range 5	±0.05% of span; For spans less than 10:1, $\pm\left[0.005 + 0.0045\left(\frac{URL}{span}\right)\right]$% of span	±0.065% of span; For spans less than 10:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	N/A
Range 1	±0.09% of span; For spans less than 15:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	±0.10% of span; For spans less than 15:1, $\pm\left[0.025 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	N/A
Range 0	±0.09% of span; For spans less than 2:1, ±0.045% of URL	±0.10% of span; For spans less than 2:1, ±0.05% of URL	N/A
3051S_CA: Coplanar Absolute Pressure			
Ranges 1 - 4	±0.025% of span; For spans less than 10:1, $\pm\left[0.004\left(\frac{URL}{span}\right)\right]$% of span	±0.055% of span; For spans less than 10:1, $\pm\left[0.0065\left(\frac{URL}{span}\right)\right]$% of span	N/A
Range 0	±0.075% of span; For spans less than 5:1, $\pm\left[0.025 + 0.01\left(\frac{URL}{span}\right)\right]$% of span	±0.075% of span; For spans less than 5:1, $\pm\left[0.025 + 0.01\left(\frac{URL}{span}\right)\right]$% of span	N/A
3051S_T: In-Line Gage Pressure or In-Line Absolute Pressure			
Ranges 1 - 4	±0.025% of span; For spans less than 10:1, $\pm\left[0.004\left(\frac{URL}{span}\right)\right]$% of span	±0.055% of span; For spans less than 10:1, $\pm\left[0.0065\left(\frac{URL}{span}\right)\right]$% of span	N/A
Range 5	±0.04% of span; For spans less than 10:1, $\pm\left[0.004\left(\frac{URL}{span}\right)\right]$% of span	±0.065% of span; For spans less than 10:1, $\pm\left[0.0065\left(\frac{URL}{span}\right)\right]$% of span	N/A
3051S_L: Coplanar Liquid Level			
	±0.065% of span; For spans less than 10:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	±0.065% of span; For spans less than 10:1, $\pm\left[0.015 + 0.005\left(\frac{URL}{span}\right)\right]$% of span	N/A

(1) Stated reference accuracy equations include terminal based linearity, hysteresis, and repeatability, but does not include analog only reference accuracy of ±0.005% of span.

(2) Specifications for process temperature are for the transmitter portion only. The transmitter is compatible with any Pt 100 (100 ohm platinum) RTD. Examples of compatible RTDs include Rosemount Series 68 and 78 RTD Temperature Sensors.

(3) RDG refers to transmitter DP reading.

(4) Ultra for Flow is only available for 3051S_CD Ranges 2-3 and 3051SMV DP Ranges 2-3. For calibrated spans from 1:1 to 2:1 of URL, add ±0.005% of span analog output error.

Total Performance[1]

Models		Ultra	Classic and Classic MV	Ultra for Flow[2]
3051SMV	DP Ranges 2-3	±0.1% of span; for ±50°F (28°C) temperature changes; 0-100% relative humidity, up to 740 psi (51 bar) line pressure (DP only), from 1:1 to 5:1 rangedown	±0.15% of span; for ±50°F (28°C) temperature changes; 0-100% relative humidity, up to 740 psi (51 bar) line pressure (DP only), from 1:1 to 5:1 rangedown	±0.1% of reading; for ±50°F (28°C) temperature changes; 0-100% relative humidity, up to 740 psi (51 bar) line pressure, over 8:1 DP turndown from URL
3051S_CD	Ranges 2-3			
3051S_CG	Ranges 2-5			
3051S_CA	Ranges 2-4			
3051S_T	Ranges 2-4			

(1) Total performance is based on combined errors of reference accuracy, ambient temperature effect, and line pressure effect. For 3051SMV, specification applies to differential pressure measurement.

(2) Ultra for Flow is only available for 3051S_CD Ranges 2-3 and 3051SMV DP Ranges 2-3.

MultiVariable Flow Performance[1]

Mass, Energy, Actual Volumetric, and Totalized Flow Reference Accuracy[2]

Models		Ultra for Flow	Classic MV
3051SMV	DP Ranges 2-3	±0.65% of Flow Rate over a 14:1 flow range (200:1 DP range)	±0.70% of Flow Rate over 8:1 flow range (64:1 DP range)
	DP Range 1	N/A	±0.90% of Flow Rate over 8:1 flow range (64:1 DP range)

(1) Applies to the 3051SMV_M MultiVariable Type only. Flow performance specifications assume device is configured for full compensation of static pressure, process temperature, density, viscosity, gas expansion, discharge coefficient, and thermal correction variances over a specified operating range.

(2) Uncalibrated differential producer (0.2 < beta < 0.6 Orifice) installed per ASME MFC 3M or ISO 5167-1. Uncertainties for discharge coefficient, producer bore, tube diameter, and gas expansion factor as defined in ASME MFC 3M or ISO 5167-1. Reference accuracy does not include RTD sensor accuracy.

Long Term Stability

Models		Ultra and Ultra for Flow[1]	Classic and Classic MV
3051SMV	DP Ranges 2-5	±0.20% of URL for 10 years; for ±50°F (28°C) temperature changes, up to 1000 psi (68,9 bar) line pressure	±0.125% of URL for 5 years; for ±50°F (28°C) temperature changes, up to 1000 psi (68,9 bar) line pressure
	AP & GP Ranges 3-4		
3051S_CD	Ranges 2-5		
3051S_CG	Ranges 2-5		
3051S_CA	Ranges 1-4		
3051S_T	Ranges 1-5		
Process Temperature RTD Interface[2]		The greater of ±0.185°F (0.103°C) or 0.1% of reading per year (excludes RTD sensor stability).	

(1) Ultra is only available for 3051SMV_ _3, 4 and 3051S. Ultra for Flow is only available for 3051S_CD Ranges 2-3 and 3051SMV DP Ranges 2-3.

(2) Specifications for process temperature are for the transmitter portion only. The transmitter is compatible with any Pt 100 (100 ohm platinum) RTD. Examples of compatible RTDs include Rosemount Series 68 and 78 RTD Temperature Sensors.

Warranty(1)

Models	Ultra and Ultra for Flow	Classic and Classic MV
3051S Scalable Products	12-year limited warranty(2)	1-year limited warranty(3)

(1) Warranty details can be found in Emerson Process Management Terms & Conditions of Sale, Document 63445, Rev G (10/06).

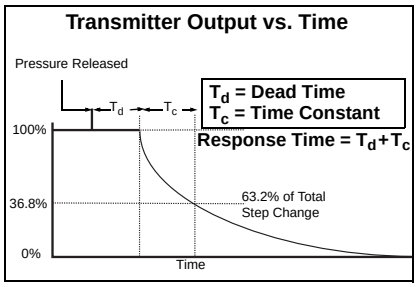
(2) Rosemount Ultra and Ultra for Flow transmitters have a limited warranty of twelve (12) years from date of shipment. All other provisions of Emerson Process Management standard limited warranty remain the same.

(3) Goods are warranted for twelve (12) months from the date of initial installation or eighteen (18) months from the date of shipment by seller, whichever period expires first.

Dynamic Performance(1)

	4 - 20 mA (HART®)(2)	Fieldbus protocol(3)
Total Response Time (Td + Tc)(4)		
3051SMV_ _1: DP, SP, & T		
3051SMV_ _2: DP & SP:		
DP Range 1:	310 milliseconds	
DP Range 2:	170 milliseconds	
DP Range 3:	155 milliseconds	
AP & GP:	240 milliseconds	
3051SMV_ _3: DP & T		
3051SMV_ _4: DP:		
DP Ranges 2-5:	145 milliseconds	
DP Range 1:	300 milliseconds	
DP Range 0:	745 milliseconds	
3051S_C Coplanar Pressure(5):		
Ranges 2 - 5:	100 milliseconds	152 milliseconds
Range 1:	255 milliseconds	307 milliseconds
Range 0:	700 milliseconds	752 milliseconds
3051S_T In-Line Pressure(5):	100 milliseconds	152 milliseconds
3051S_L Liquid Level:	See *Instrument Toolkit*®	See *Instrument Toolkit*
Dead Time (Td)		
3051SMV:		
DP:	100 milliseconds	
AP & GP:	140 milliseconds	
Process Temp. RTD Interface:	1 second	
3051S(6):	45 milliseconds (nominal)	97 milliseconds
Update Rate		
3051SMV:		
DP:	22 updates per second	
AP & GP:	11 updates per second	
Process Temp. RTD Interface:	1 update per second	
3051SMV Calculated Variables:		
Mass or Volumetric Flow Rate:	22 updates per second	
Energy Flow Rate:	22 updates per second	
Totalized Flow:	1 update per second	
3051S:	22 updates per second	22 updates per second

Typical Transmitter Response Time



(1) Does not apply to wireless output code X. See "Wireless Self-Organizing Networks" on page 16 for wireless update rate.

(2) Dead time and update rate apply to all models and ranges; analog output only

(3) Transmitter fieldbus output only, segment macro-cycle not included.

(4) Nominal total response time at 75 °F (24 °C) reference conditions.

(5) For option code DA1, add 45 milliseconds (nominal) to 4-20 mA (HART) total response time values.

(6) For option code DA1, dead time (Td) is 90 milliseconds (nominal).

Ambient Temperature Effect

Models	Ultra per 50 °F (28 °C)	Classic or Classic MV per 50 °F (28 °C)	Ultra for Flow[1] -40 to 185 °F (-40 to 85 °C)
3051SMV_ _1: Differential Pressure, Static Pressure, & Temperature **3051SMV_ _2: Differential Pressure & Static Pressure**			
DP Ranges 2 - 3	N/A	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) for > 5:1	±0.13% reading up to 8:1 DP turndown from URL; ±[0.13 + 0.0187 (URL/RDG[3])]% reading to 100:1 DP turndown from URL
DP Range 1	N/A	± (0.1% URL + 0.25% Span) from 1:1 to 50:1	N/A
AP and GP	N/A	± (0.0125% URL + 0.0625% Span) from 1:1 to 10:1; ± (0.025% URL + 0.125% Span) for >10:1	± (0.009% URL + 0.025% Span) from 1:1 to 10:1; ± (0.018% URL + 0.08% Span) for >10:1
3051SMV_ _ 3: Differential Pressure & Temperature **3051SMV_ _ 4: Differential Pressure**			
Range 2 - 5[2]	± (0.009% URL + 0.025% span) from 1:1 to 10:1; ± (0.018% URL + 0.08% span) from >10:1 to 200:1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	±0.13% reading up to 8:1 DP turndown from URL; ±[0.13 + 0.0187 (URL/RDG[3])] % reading to 100:1 DP turndown from URL
Range 0	± (0.25% URL + 0.05% span) from 1:1 to 30:1	± (0.25% URL + 0.05% span) from 1:1 to 30:1	N/A
Range 1	± (0.1% URL + 0.25% span) from 1:1 to 50:1	± (0.1% URL + 0.25% span) from 1:1 to 50:1	N/A
Process Temp. RTD Interface[4]	N/A	±0.39 °F (0,216 °C) per 50 °F (28 °C)	±0.39 °F (0,216 °C) per 50 °F (28 °C)
3051S_CD: Coplanar Differential Pressure **3051S_CG: Coplanar Gage Pressure**			
Range 2 - 5[2]	± (0.009% URL + 0.025% span) from 1:1 to 10:1; ± (0.018% URL + 0.08% span) from >10:1 to 200:1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	±0.13% reading up to 8:1 DP turndown from URL; ±[0.13 + 0.0187 (URL/RDG[3])]% reading to 100:1 DP turndown from URL
Range 0	± (0.25% URL + 0.05% span) from 1:1 to 30:1	± (0.25% URL + 0.05% span) from 1:1 to 30:1	N/A
Range 1	± (0.1% URL + 0.25% span) from 1:1 to 50:1	± (0.1% URL + 0.25% span) from 1:1 to 50:1	N/A
3051S_CA: Coplanar Absolute Pressure			
Ranges 2 - 4	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 200:1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	N/A
Range 0	± (0.1% URL + 0.25% span) from 1:1 to 30:1	± (0.1% URL + 0.25% span) from 1:1 to 30:1	N/A
Range 1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	N/A
3051S_T: In-Line Gage Pressure or In-Line Absolute Pressure			
Ranges 2 - 4	± (0.009% URL + 0.025% span) from 1:1 to 10:1; ± (0.018% URL + 0.08% span) from >10:1 to 100:1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	N/A
Range 5	± (0.05% URL + 0.075% span) from 1:1 to 10:1	± (0.05% URL + 0.075% span) from 1:1 to 5:1	N/A
Range 1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	± (0.0125% URL + 0.0625% span) from 1:1 to 5:1; ± (0.025% URL + 0.125% span) from >5:1 to 100:1	N/A
3051S_L: Coplanar Liquid Level			
	See *Instrument Toolkit*.	See *Instrument Toolkit*.	

(1) Ultra for Flow is only available for 3051S_CD Ranges 2-3 and 3051SMV DP Ranges 2-3.

(2) Use Classic specification for 3051SMV DP Range 5 Ultra and 3051S_CD Range 5 Ultra.

(3) RDG refers to transmitter reading.

(4) Specifications for process temperature are for the transmitter portion only. The transmitter is compatible with any Pt 100 (100 ohm platinum) RTD. Examples of compatible RTDs include Rosemount Series 68 and 78 RTD Temperature Sensors.

Line Pressure Effect[1]

Models	Ultra and Ultra for Flow	Classic and Classic MV
3051SMV: Differential Pressure Measurement Only		
3051S_CD: Coplanar Differential Pressure		
	Zero Error[2]	**Zero Error[2]**
Range 2-3	± 0.025% URL per 1000 psi (69 bar)	± 0.05% URL per 1000 psi (69 bar)
Range 0	± 0.125% URL per 100 psi (6,89 bar)	± 0.125% URL per 100 psi (6,89 bar)
Range 1	± 0.25% URL per 1000 psi (69 bar)	± 0.25% URL per 1000 psi (69 bar)
	Span Error[3]	**Span Error[3]**
Range 2-3	± 0.1% of reading per 1000 psi (69 bar)	± 0.1% of reading per 1000 psi (69 bar)
Range 0	± 0.15% of reading per 100 psi (6,89 bar)	± 0.15% of reading per 100 psi (6,89 bar)
Range 1	± 0.4% of reading per 1000 psi (69 bar)	± 0.4% of reading per 1000 psi (69 bar)

(1) For zero error specifications for line pressures above 2000 psi (137,9 bar) or line pressure effect specifications for DP Ranges 4-5, see the 3051SMV Reference Manual (document number 00809-0100-4803) or 3051S Reference Manual (document number 00809-0100-4801).

(2) Zero error can be zeroed.

(3) Specifications for option code P0 are 2 times those shown above.

Mounting Position Effects

Models		Ultra, Ultra for Flow, Classic and Classic MV
3051SMV_ _ 1, 2	DP:	Zero shifts up to ±1.25 inH_2O (3,11 mbar), which can be zeroed; no span effect
	AP/GP:	Zero shifts to ±2.5 inH_2O (6,22 mbar), which can be zeroed; no span effect
3051SMV_ _ 3, 4		Zero shifts up to ±1.25 inH_2O (3,11 mbar), which can be zeroed; no span effect
3051S_CD, CG		Zero shifts up to ±1.25 inH_2O (3,11 mbar), which can be zeroed; no span effect
3051S_CA		Zero shifts to ±2.5 inH_2O (6,22 mbar), which can be zeroed; no span effect
3051S_T		Zero shifts to ±2.5 inH_2O (6,22 mbar), which can be zeroed; no span effect
3051S_L		With liquid level diaphragm in vertical plane, zero shift of up to ±1 inH_2O (2,49 mbar); with diaphragm in horizontal plane, zero shift of up to ±5 inH_2O (12,45 mbar) plus extension length on extended units; all zero shifts can be zeroed; no span effect

Vibration Effect

Less than ±0.1% of URL when tested per the requirements of IEC60770-1 field or pipeline with high vibration level (10-60 Hz 0.21mm displacement peak amplitude / 60-2000 Hz 3g).

For Housing Style codes 1J, 1K, 1L, 2J, and 2M:
Less than ±0.1% of URL when tested per the requirements of IEC60770-1 field with general application or pipeline with low vibration level (10-60 Hz 0.15mm displacement peak amplitude / 60-500 Hz 2g).

Power Supply Effect

Less than ±0.005% of calibrated span per volt change in voltage at the transmitter terminals

Electromagnetic Compatibility (EMC)

Meets all relevant requirements of EN 61326 and NAMUR NE-21.[1][2]

(1) NAMUR NE-21 does not apply to wireless output code X.

(2) 3051SMV requires shielded cable for both temperature and loop wiring.

Transient Protection (Option T1)

Meets IEEE C62.41.2-2002, Location Category B

6 kV crest (0.5 μs - 100 kHz)

3 kA crest (8 × 20 microseconds)

6 kV crest (1.2 × 50 microseconds)

Meets IEEE C37.90.1-2002 Surge Withstand Capability

SWC 2.5 kV crest, 1.0 MHz wave form

FUNCTIONAL SPECIFICATIONS

Range and Sensor Limits

Range	3051SMV Differential Pressure Range and Sensor Limits			
	Minimum Span		Range Limits	
	Ultra and Ultra for Flow	Classic and Classic MV	Upper (URL)	Lower (LRL)(1)
0	0.1 inH_2O (0,25 mbar)	0.1 inH_2O (0,25 mbar)	3.0 inH_2O (7,5 mbar)	-3.0 inH_2O (-7,5 mbar)
1	0.5 inH_2O (1,24 mbar)	0.5 inH_2O (1,24 mbar)	25.0 inH_2O (62,3 mbar)	-25.0 inH_2O (-62,3 mbar)
2	1.3 inH_2O (3,11 mbar)	2.5 inH_2O (6,23 mbar)	250.0 inH_2O (0,62 bar)	-250.0 inH_2O (-0,62 bar)
3	5.0 inH_2O (12,4 mbar)	10.0 inH_2O (24,9 mbar)	1000.0 inH_2O (2,49 bar)	-1000.0 inH_2O (-2,49 bar)
4	1.5 psi (103,4 mbar)	3.0 psi (206,8 mbar)	300.0 psi (20,7 bar)	-300.0 psi (-20,7 bar)
5	10.0 psi (689,5 mbar)	20.0 psi (1,38 bar)	2000.0 psi (137,9 bar)	- 2000.0 psi (-137,9 bar)

(1) Lower (LRL) is 0 inH_2O (0 mbar) for Ultra for Flow.

Range	3051SMV Static Pressure Range and Sensor Limits				
	Minimum Span		Range Limits		
	Ultra for Flow	Classic MV	Upper (URL)	Lower (LRL) (Absolute)	Lower (LRL) (Gage)(1)(2)
3	4.0 psi (276 mbar)	8.0 psi (552 mbar)	800 psi (55,16 bar)	0.5 psia (34,5 mbar)	-14.2 psig (-0,98 bar)
4	18.13 psi (1,25 bar)	36.26 psi (2,50 bar)	3626 psi (250.0 bar)(3)	0.5 psia (34,5 mbar)	-14.2 psig (-0,98 bar)

(1) Assumes atmospheric pressure of 14.7 psig (1 bar).

(2) Inert Fill: Minimum pressure = 1.5 psia (0,10 bar) or -13.2 psig (-0,91 bar).

(3) For SP Range 4 and DP Range 1, the URL is 2000 psi (137,9 bar).

Process Temperature RTD Interface Range Limits(1)		
Minimum Span	Upper (URL)	Lower (LRL)
50 °F (28 °C)	1562 °F (850 °C)	-328 °F (-200 °C)

(1) Designed to accommodate a Pt 100 RTD sensor. Examples of compatible RTDs include Rosemount Series 68 and 78 RTD Temperature Sensors.

Range	3051S_CD, CG, LD, LG Range and Sensor Limits					
	Minimum Span		Range Limits			
				Lower (LRL)		
	Ultra and Ultra for Flow	Classic	Upper (URL)	3051S_CD(1)	3051S_CG, LG(2)(3)	3051S_LD(2)
0	0.1 inH_2O (0,25 mbar)	0.1 inH_2O (0,25 mbar)	3.0 inH_2O (7,5 mbar)	-3.0 inH_2O (-7,5 mbar)	NA	NA
1	0.5 inH_2O (1,24 mbar)	0.5 inH_2O (1,24 mbar)	25.0 inH_2O (62,3 mbar)	-25.0 inH_2O (-62,3 mbar)	-25.0 inH_2O (-62,3 mbar)	-25.0 inH_2O (-62,3 mbar)
2	1.3 inH_2O (3,11 mbar)	2.5 inH_2O (6,23 mbar)	250.0 inH_2O (0,62 bar)	-250.0 inH_2O (-0,62 bar)	-250.0 inH_2O (-0,62 bar)	-250.0 inH_2O (-0,62 bar)
3	5.0 inH_2O (12,4 mbar)	10.0 inH_2O (24,9 mbar)	1000.0 inH_2O (2,49 bar)	-1000.0 inH_2O (-2,49 bar)	-393.0 inH_2O (-979 mbar)	-1000.0 inH_2O (-2,49 bar)
4	1.5 psi (103,4 mbar)	3.0 psi (206,8 mbar)	300.0 psi (20,7 bar)	-300.0 psi (-20,7 bar)	-14.2 psig (-979 mbar)	-300.0 psi (-20,7 bar)
5	10.0 psi (689,5 mbar)	20.0 psi (1,38 bar)	2000.0 psi (137,9 bar)	- 2000.0 psi (-137,9 bar)	-14.2 psig (-979 mbar)	- 2000.0 psi (-137,9 bar)

(1) Lower (LRL) is 0 inH_2O (0 mbar) for Ultra for Flow.

(2) When specifying a 3051S_L Ultra, use Classic minimum span.

(3) Assumes atmospheric pressure of 14.7 psig (1 bar).

Range	3051S_T Range and Sensor Limits				
	Minimum Span		Range Limits		
	Ultra	Classic	Upper (URL)	Lower (LRL) (Abs.)	Lower(1) (LRL) (Gage)
1	0.3 psi (20,7 mbar)	0.3 psi (20,7 mbar)	30 psi (2,07 bar)	0 psia (0 bar)	-14.7 psig (-1,01 bar)
2	0.75 psi (51,7 mbar)	1.5 psi (0,103 bar)	150 psi (10,34 bar)	0 psia (0 bar)	-14.7 psig (-1,01 bar)
3	4 psi (275,8 mbar)	8 psi (0,55 bar)	800 psi (55,16 bar)	0 psia (0 bar)	-14.7 psig (-1,01 bar)
4	20 psi (1,38 bar)	40 psi (2,76 bar)	4000 psi (275,8 bar)	0 psia (0 bar)	-14.7 psig (-1,01 bar)
5	1000 psi (68,9 bar)	2000 psi (137,9 bar)	10000 psi (689,5 bar)	0 psia (0 bar)	-14.7 psig (-1,01 bar)

(1) Assumes atmospheric pressure of 14.7 psig (1 bar).

Range	3051S_CA, LA(1) Range and Sensor Limits			
	Minimum Span		Range Limits	
	Ultra	Classic	Upper (URL)	Lower (LRL)
0(2)	0.167 psia (11,5 mbar)	0.167 psia (11,5 mbar)	5 psia (0,34 bar)	0 psia (0 bar)
1	0.3 psia (20,7 mbar)	0.3 psia (20,7 mbar)	30 psia (2,07 bar)	0 psia (0 bar)
2	0.75 psia (51,7 mbar)	1.5 psia (0,103 bar)	150 psia (10,34 bar)	0 psia (0 bar)
3	4 psia (275,8 mbar)	8 psia (0,55 bar)	800 psia (55,16 bar)	0 psia (0 bar)
4	20 psia (1,38 bar)	40 psia (2,76 bar)	4000 psia (275,8 bar)	0 psia (0 bar)

(1) When specifying a 3051S_L Ultra, use Classic minimum span.

(2) Range 0 is not available for 3051S_LA.

Service

3051S and 3051SMV_P (Direct Process Variable Output):

Liquid, gas, and vapor applications

3051SMV_M (Mass and Energy Flow Output):

Some fluid types are only supported by certain measurement types

Fluid Compatibility with Pressure and Temperature Compensation • Available — Not available

Ordering Code	Measurement Type	Fluid Types			
		Liquids	Saturated Steam	Superheated Steam	Gas and Natural Gas
1	DP / P/ T (Full Compensation)	•	•	•	•
2	DP / P	•	•	•	•
3	DP / T	•	•	—	—
4	DP only	•	•	—	—

4–20 mA/HART

Zero and Span Adjustment

Zero and span values can be set anywhere within the range. Span must be greater than or equal to the minimum span.

Output

Two-wire 4–20 mA is user-selectable for linear or square root output. Digital process variable superimposed on 4–20 mA signal, available to any host that conforms to the HART protocol.

Power Supply

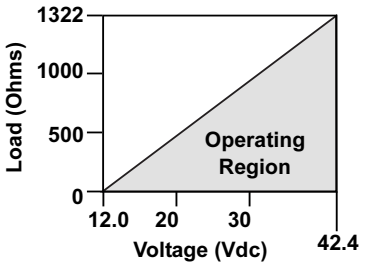
External power supply required.
3051SMV transmitter: 12 to 42.4 Vdc with no load
3051S transmitter (4–20 mA): 10.5 to 42.4 Vdc with no load
3051S HART Diagnostics transmitter: 12 to 42.4 Vdc with no load

Load Limitations

Maximum loop resistance is determined by the voltage level of the external power supply, as described by:

3051SMV Transmitter
3051S HART Diagnostics Transmitter (option code DA1)

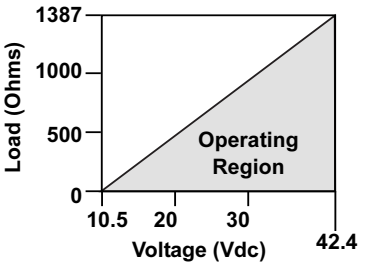
Maximum Loop Resistance = 43.5 * (Power Supply Voltage – 12.0)



The HART communicator requires a minimum loop resistance of 250Ω for communication.

3051S Transmitter

Maximum Loop Resistance = 43.5 * (Power Supply Voltage – 10.5)



The HART communicator requires a minimum loop resistance of 250Ω for communication.

ASP™ Diagnostics Suite for HART (Option Code DA1)

The 3051S provides Abnormal Situation Prevention indication for a breakthrough in diagnostic capability. The 3051S ASP Diagnostics Suite for HART includes Statistical Process Monitoring (SPM), variable logging with time stamp and advanced process alerts. The enhanced EDDL graphic display provides an intuitive and user-friendly interface to better visualize these diagnostics.

The integral SPM technology calculates the mean and standard deviation of the process variable 22 times per second and makes them available to the user. The 3051S uses these values and highly flexible configuration options for customization to detect many user-defined or application specific abnormal situations (e.g. detecting plugged impulse lines and fluid composition change). Variable logging with time stamp and advanced process alerts capture valuable process and sensor data to enable quick troubleshooting of application and installation issues.

FOUNDATION fieldbus

Power Supply

External power supply required; transmitters operate on 9.0 to 32.0 Vdc transmitter terminal voltage.

Current Draw

17.5 mA for all configurations (including LCD display option)

FOUNDATION fieldbus Parameters

Schedule Entries	14 (max.)
Links	30 (max.)
Virtual Communications Relationships (VCR)	20 (max.)

Standard Function Blocks

Resource Block

- Contains hardware, electronics, and diagnostic information.

Transducer Block

- Contains actual sensor measurement data including the sensor diagnostics and the ability to trim the pressure sensor or recall factory defaults.

LCD Block

- Configures the local display.

2 Analog Input Blocks

- Processes the measurements for input into other function blocks. The output value is in engineering or custom units and contains a status indicating measurement quality.

PID Block with Auto-tune

- Contains all logic to perform PID control in the field including cascade and feedforward. Auto-tune capability allows for superior tuning for optimized control performance.

Backup Link Active Scheduler (LAS)

The transmitter can function as a Link Active Scheduler if the current link master device fails or is removed from the segment.

Software Upgrade in the Field

Software for the 3051S with FOUNDATION fieldbus is easy to upgrade in the field using the FOUNDATION fieldbus Common Device Software Download procedure.

PlantWeb Alerts

Enable the full power of the PlantWeb digital architecture by diagnosing instrumentation issues, communicating advisory, maintenance, and failure details, and recommending a solution.

Advanced Control Function Block Suite (Option Code A01)

Input Selector Block

- Selects between inputs and generates an output using specific selection strategies such as minimum, maximum, midpoint, average, or first “good.”

Arithmetic Block

- Provides pre-defined application-based equations including flow with partial density compensation, electronic remote seals, hydrostatic tank gauging, ratio control and others.

Signal Characterizer Block

- Characterizes or approximates any function that defines an input/output relationship by configuring up to twenty X, Y coordinates. The block interpolates an output value for a given input value using the curve defined by the configured coordinates.

Integrator Bock

- Compares the integrated or accumulated value from one or two variables to pre-trip and trip limits and generates discrete output signals when the limits are reached. This block is useful for calculating total flow, total mass, or volume over time.

Output Splitter Block

- Splits the output of one PID or other control block so that the PID will control two valves or other actuators.

Control Selector Block

- Selects one of up to three inputs (highest, middle, or lowest) that are normally connected to the outputs of PID or other control function blocks.

Block	Execution Time
Resource	-
Transducer	-
LCD Block	-
Analog Input 1, 2	20 milliseconds
PID with Auto-tune	35 milliseconds
Input Selector	20 milliseconds
Arithmetic	20 milliseconds
Signal Characterizer	20 milliseconds
Integrator	20 milliseconds
Output Splitter	20 milliseconds
Control Selector	20 milliseconds

Fully Compensated Mass Flow Block (Option Code H01)

Calculates fully compensated mass flow based on differential pressure with external process pressure and temperature measurements over the fieldbus segment. Configuration for the mass flow calculation is easily accomplished using the Rosemount Engineering Assistant.

ASP Diagnostics Suite for FOUNDATION fieldbus (Option Code D01)

The 3051S ASP Diagnostics Suite for FOUNDATION fieldbus provides Abnormal Situation Prevention indication and enhanced EDDL graphic displays for easy visual analysis.

The integral Statistical Process Monitoring (SPM) technology calculates the mean and standard deviation of the process variable 22 times per second and makes them available to the user. The 3051S uses these values and highly flexible configuration options for customization to detect many user-defined or application specific abnormal situations (e.g. detecting plugged impulse lines and fluid composition change).

Wireless Self-Organizing Networks

Output

WirelessHART, 2.4 GHz DSSS.
Wireless, 2.4 GHz DSSS or 900 MHz FHSS.

Local Display (WirelessHART only)

The optional five-digit LCD can display user-selectable information such as primary variable in engineering units, percent of range, sensor module temperature, and electronics temperature. Display updates at up to once per minute.

Local Display

The optional five-digit LCD can display primary variable in engineering units. Display updates at update rate up to once per minute.

Update Rate

WirelessHART, user selectable 8 sec. to 60 min.
Wireless, user selectable 15 sec. to 60 min.

Power Module (WirelessHART only)

Field replaceable, keyed connection eliminates the risk of incorrect installation, Intrinsically Safe Lithium-thionyl chloride Power Module with polybutadine terephthalate (PBT) enclosure. Ten-year life at one minute update rate.(1)

(1) Reference conditions are 70 °F (21 °C), and routing data for three additional network devices.
NOTE: Continuous exposure to ambient temperature limits of -40 °F or 185 °F (-40 °C or 85 °C) may reduce specified life by less than 20 percent.

Power Module

Field replaceable, keyed connection eliminates the risk of incorrect installation, Intrinsically Safe Lithium-thionyl chloride Power Module with polybutadine terephthalate (PBT) enclosure. Five-year life at one minute update rate, ten-year life at ten minute update rate.(1)

(1) Reference conditions are 70 °F (21 °C), and routing data for three additional network devices.
NOTE: Continuous exposure to ambient temperature limits of -40 °F or 185 °F (-40 °C or 85 °C) may reduce specified life by less than 20 percent.

Overpressure Limits

Transmitters withstand the following limits without damage:

3051SMV_ _1: Differential & Static Pressure, Temperature
3051SMV_ _2: Differential Pressure & Static Pressure

Static Pressure	Differential Pressure		
	Range 1	Range 2	Range 3
Range 3 GP/AP	1600 psi (110,3 bar)	1600 psi (110,3 bar)	1600 psi (110,3 bar)
Range 4 GP/AP	2000 psi (137,9 bar)	3626 psi (250 bar)	3626 psi (250 bar)

3051SMV_ _ 3: Differential Pressure & Temperature
3051SMV_ _ 4: Differential Pressure
3051S_CD: Coplanar Differential Pressure
3051S_CG: Coplanar Gage Pressure

Range 0: 750 psi (51,7 bar)
Range 1: 2000 psig (137,9 bar)
Ranges 2–5: 3626 psig (250,0 bar)
4500 psig (310,3 bar) for option code P9
6092 psig (420 bar) for option code P0 (Classic only)

3051S_CA: Coplanar Absolute Pressure

Range 0: 60 psia (4,13 bar)
Range 1: 750 psia (51,7 bar)
Range 2: 1500 psia (103,4 bar)
Range 3: 1600 psia (110,3 bar)
Range 4: 6000 psia (413,7 bar)

3051S_T: In-Line Gage or Absolute Pressure

Range 1: 750 psi (51,7 bar)
Range 2: 1500 psi (103,4 bar)
Range 3: 1600 psi (110,3 bar)
Range 4: 6000 psi (413,7 bar)
Range 5: 15000 psi (1034,2 bar)

3051S_L: Coplanar Liquid Level

Limit is flange rating or sensor rating, whichever is lower (see the table below).

Standard	Type	CS Rating	SST Rating
ANSI/ASME	Class 150	285 psig	275 psig
ANSI/ASME	Class 300	740 psig	720 psig
ANSI/ASME	Class 600	1480 psig	1440 psig
At 100 °F (38 °C), the rating decreases with increasing temperature, per ANSI/ASME B16.5.			
DIN	PN 10–40	40 bar	40 bar
DIN	PN 10/16	16 bar	16 bar
DIN	PN 25/40	40 bar	40 bar
At 248 °F (120 °C), the rating decreases with increasing temperature, per DIN 2401.			

Static Pressure Limit

3051SMV_ _1: Differential & Static Pressure, Temperature
3051SMV_ _2: Differential Pressure & Static Pressure

Operates within 0.5 psia (0,03 bar) and the values in the table below:

Static Pressure	Differential Pressure		
	Range 1	Range 2	Range 3
Range 3 GP/AP	800 psi (57,91 bar)	800 psi (57,91 bar)	800 psi (57,91 bar)
Range 4 GP/AP	2000 psi (137,9 bar)	3626 psi (250 bar)	3626 psi (250 bar)

3051SMV_ _ 3: Differential Pressure & Temperature
3051SMV_ _ 4: Differential Pressure
3051S_CD: Coplanar Differential Pressure

Operates within specifications between static line pressures of 0.5 psia and 3626 psig;
4500 psig (310,3 bar) for option code P9
6092 psig (420 bar) for option code P0 (Classic only)
Range 0: 0.5 psia to 750 psig (0,03 to 51,71 bar)
Range 1: 0.5 psia to 2000 psig (0,03 to 137,9 bar)

Burst Pressure Limits

3051SMV and 3051S_C with Coplanar or Traditional Process Flange

10000 psig (689,5 bar)

3051S_T: In-Line Gage or Absolute Pressure

Ranges 1–4: 11000 psi (758,4 bar)
Range 5: 26000 psig (1792,64 bar)

Temperature Limits

Ambient

-40 to 185 °F (-40 to 85 °C)
With LCD display(1): -40 to 175 °F (-40 to 80 °C)
With option code P0: -20 to 185 °F (-29 to 85 °C)

(1) LCD display may not be readable and LCD updates will be slower at temperatures below -4 °F (-20 °C).

Storage

-50 to 185 °F (-46 to 85 °C)
With LCD display: -40 to 185 °F (-40 to 85 °C)
With Wireless Output: -40 to 185 °F (-40 to 85 °C)

Process Temperature Limits

At atmospheric pressures and above:

3051SMV and 3051S_C	
Silicone Fill Sensor(1)(2)	
with Coplanar Flange	-40 to 250 °F (-40 to 121 °C)(3)
with Traditional Flange	-40 to 300 °F (-40 to 149 °C)(3)(4)
with Level Flange	-40 to 300 °F (-40 to 149 °C)(3)
with 305 Integral Manifold	-40 to 300 °F (-40 to 149 °C)(3)(4)
Inert Fill Sensor(1)(5)	-40 to 185 °F (-40 to 85 °C)(6)(7)
3051S_T In-Line (Process Fill Fluid)	
Silicone Fill Sensor(1)	-40 to 250 °F (-40 to 121 °C)(3)
Inert Fill Sensor(1)	-22 to 250 °F (-30 to 121 °C)(3)
3051S_L Low-Side Temperature Limits	
Silicone Fill Sensor(1)	-40 to 250 °F (-40 to 121 °C)(3)
Inert Fill Sensor(1)	0 to 185 °F (-18 to 85 °C)(3)
3051S_L High-Side Temperature Limits (Process Fill Fluid)	
Syltherm® XLT	-102 to 293 °F (-75 to 145 °C)
D. C.® Silicone 704(8)	32 to 400 °F (0 to 205 °C)
D. C. Silicone 200	-49 to 400 °F (-45 to 205 °C)
Inert (Halocarbon)	-49 to 320 °F (-45 to 160 °C)
Glycerin and Water	5 to 203 °F (-15 to 95 °C)
Neobee M-20®	5 to 400 °F (-15 to 205 °C)
Propylene Glycol and Water	5 to 203 °F (-15 to 95 °C)

(1) Process temperatures above 185 °F (85 °C) require derating the ambient limits by a 1.5:1 ratio. For example, for process temperature of 195 °F (91 °C), new ambient temperature limit is equal to 170 °F (77 °C). This can be determined as follows: (195 °F - 185 °F) x 1.5 = 15 °F, 185 °F - 15 °F = 170 °F

(2) 212 °F (100 °C) is the upper process temperature limit for DP Range 0.

(3) 220 °F (104 °C) limit in vacuum service; 130 °F (54 °C) for pressures below 0.5 psia.

(4) -20 °F (-29 °C) is the lower process temperature limit with option code P0.

(5) 32 °F (0 °C) is the lower process temperature limit for DP Range 0.

(6) For 3051S_C, 160 ° F (71 °C) limit in vacuum service. For 3051SMV_ _ 1, 2, 140 ° F (60 °C) limit in vacuum service.

(7) Not available for 3051S_CA.

(8) Upper limit of 600 °F (315 °C) is available with 1199 seal assemblies mounted away from the transmitter with the use of capillaries and up to 500 °F (260 °C) with direct mount extension.

Humidity Limits

0–100% relative humidity

Turn-On Time(1)

Performance within specifications less than 5 seconds for 3051SMV (typical) and 2 seconds for 3051S (typical) after power is applied to the transmitter.

(1) Does not apply to wireless option code X.

Volumetric Displacement

Less than 0.005 in^3 (0,08 cm^3)

Damping(1)

Analog output response to a step change is user-selectable from 0 to 60 seconds for one time constant. For 3051SMV, each variable can be individually adjusted. This software damping is in addition to sensor module response time.

(1) Does not apply to wireless option code X.

Failure Mode Alarm

HART 4-20mA (output option code A)

If self-diagnostics detect a gross transmitter failure, the analog signal will be driven offscale to alert the user. Rosemount standard (default), NAMUR, and custom alarm levels are available (see Alarm Configuration below).

High or low alarm signal is software-selectable or hardware-selectable via the optional switch (option D1).

Alarm Configuration

	High Alarm	Low Alarm
Default	≥ 21.75 mA	≤ 3.75 mA
NAMUR compliant(1)	≥ 22.5 mA	≤ 3.6 mA
Custom levels(2)	20.2 - 23.0 mA	3.6 - 3.8 mA

(1) Analog output levels are compliant with NAMUR recommendation NE 43, see option codes C4 or C5.

(2) Low alarm must be 0.1 mA less than low saturation and high alarm must be 0.1 mA greater than high saturation.

Safety-Certified Transmitter Failure Values(1)

Safety accuracy: 2.0%(2)
Safety response time: 1.5 seconds

(1) Does not apply to wireless option code X.

(2) A 2% variation of the transmitter mA output is allowed before a safety trip. Trip values in the DCS or safety logic solver should be derated by 2%.

PHYSICAL SPECIFICATIONS

Electrical Connections

1/2–14 NPT, G1/2, and M20 × 1.5 (CM20) conduit. HART interface connections fixed to terminal block for Output code A and X.

Process Connections

3051SMV and 3051S_C

1/4–18 NPT on 2 1/8-in. centers

1/2–14 NPT and RC 1/2 on 2-in.(50.8mm), 2 1/8-in. (54.0 mm), or 2 1/4-in. (57.2mm) centers (process adapters)

3051S_T

1/2–14 NPT female,
Non-Threaded instrument flange (available in SST for Range 1–4 transmitters only),
G1/2 A DIN 16288 Male (available in SST for Range 1–4 transmitters only), or
Autoclave type F-250-C (Pressure relieved 9/16–18 gland thread; 1/4 OD high pressure tube 60° cone; available in SST for Range 5 transmitters only).

3051S_L

High pressure side: 2-in.(50.8 mm), 3-in. (72 mm), or 4-in. (102 mm), ASME B 16.5 (ANSI) Class 150, 300 or 600 flange; 50, 80 or 100 mm, DIN 2501 PN 40 or 10/16 flange

Low pressure side: 1/4–18 NPT on flange, 1/2–14 NPT on process adapter

Process-Wetted Parts

Process Isolating Diaphragms

Isolating Diaphragm Material	3051SMV	3051S_ CD, CG	3051S_ T	3051S_ CA	3051S_ L
316L SST (UNS S31603)	•	•	•	•	See Below
Alloy C-276 (UNS N10276)	•	•	•	•	
Alloy 400 (UNS N04400)	•	•		•	
Tantalum (UNS R05440)	•	•			
Gold-plated Alloy 400	•	•		•	
Gold-plated 316L SST	•	•		•	

Drain/Vent Valves

316 SST, Alloy C-276, or Alloy 400/K-500(1) material
(Drain vent seat: Alloy 400, Drain vent stem: Alloy K-500)

(1) Alloy 400/K-500 is not available with 3051S_L.

Process Flanges and Adapters

Plated carbon steel
SST: CF-8M (Cast 316 SST) per ASTM A743
Cast C-276: CW-12MW per ASTM A494
Cast Alloy 400: M-30C per ASTM A494

Wetted O-rings

Glass-filled PTFE
(Graphite-filled PTFE with Isolating Diaphragm code 6)

3051S_L Process Wetted Parts

Flanged Process Connection (Transmitter High Side)

Process Diaphragms, Including Process Gasket Surface

316L SST, Alloy C-276, or Tantalum

Extension

CF-3M (Cast 316L SST, material per ASTM A743), or CW-12MW (Cast C-276, material ASTM A494); fits schedule 40 and 80 pipe

Mounting Flange

Zinc-cobalt plated CS or 316 SST

Reference Process Connection (Transmitter Low Side)

Isolating Diaphragms

316L SST or Alloy C-276

Process Flange and Adapter

CF-8M (Cast 316 SST, material per ASTM A743)

Non-Wetted Parts

Electronics Housing

Low-copper aluminum alloy or SST: CF-3M (Cast 316L SST) or CF-8M (Cast 316 SST)
NEMA 4X, IP 66, IP 68 (66 ft (20 m) for 168 hours)
Note: IP 68 not available with Wireless Output.

Coplanar Sensor Module Housing

SST: CF-3M (Cast 316L SST)

Bolts

Plated carbon steel per ASTM A449, Type 1
Austenitic 316 SST per ASTM F593
ASTM A453, Class D, Grade 660 SST
ASTM A193, Grade B7M alloy steel
ASTM A193, Class 2, Grade B8M SST
Alloy K-500

Sensor Module Fill Fluid

Silicone or inert halocarbon (Inert is not available with 3051S_CA). In-Line series uses Fluorinert® FC-43.

Process Fill Fluid (Liquid Level Only)

3051S_L: *Syltherm* XLT, *D.C.*® Silicone 704, *D.C.* Silicone 200, inert, glycerin and water, *Neobee M-20*, propylene glycol and water.

Paint

Polyurethane

Cover O-rings

Buna-N

Wireless Antenna

PBT/ polycarbonate (PC) integrated omnidirectional antenna

Power Module

Field replaceable, keyed connection eliminates the risk of incorrect installation, Intrinsically Safe Lithium-thionyl chloride Power Module with PBT enclosure

Shipping Weights

SuperModule Platform Weights

SuperModule Platform	Weight in lb. (kg)
3051SMV[1] and 3051S_C[1]	3.1 (1,4)
3051S_T	1.4 (0,6)

(1) Flange and bolts not included.

Transmitter Weights Without Options

Complete Transmitter[1]	Weight in lb. (kg)
3051S_C (SST Flange) with junction box housing	6.3 (2,8)
3051S_T with junction box housing	3.2 (1,4)
3051SMV and 3051S_C (SST Flange) with PlantWeb housing	6.7 (3,1)
3051S_T with PlantWeb housing	3.7 (1,7)
3051S_C (SST Flange) with wireless PlantWeb housing	7.3 (3,3)
3051S_T with wireless PlantWeb housing	4.2 (1,9)

(1) Fully functional transmitter with module, housing, terminal block, and covers. Does not include LCD display.

3051S_L Weights Without SuperModule Platform, Housing, or Transmitter Options

Flange	Flush lb. (kg)	2-in. Ext. lb (kg)	4-in. Ext. lb (kg)	6-in. Ext. lb (kg)
2-in., 150	9.5 (4,3)	—	—	—
3-in., 150	15.7 (7,1)	16.4 (7,4)	17.6 (8,0)	18.9 (8,6)
4-in., 150	21.2 (9,6)	20.9 (9,5)	22.1 (10,0)	23.4 (10,6)
2-in., 300	11.3 (5,1)	—	—	—
3-in., 300	19.6 (8,9)	20.3 (9,2)	21.5 (9,8)	22.8 (10,3)
4-in., 300	30.4 (13.8)	30.3 (13,7)	31.5 (14,3)	32.8 (14,9)
2-in., 600	12.8 (5,8)	—	—	—
3-in., 600	22.1 (10,0)	22.8 (10,3)	24.0 (10,9)	25.3 (11,5)
DN 50 / PN 40	11.3 (5,1)	—	—	—
DN 80 / PN 40	16.0 (7,3)	16.7 (7,6)	17.9 (8,1)	19.2 (8,7)
DN 100 / PN 10/16	11.2 (5,1)	11.9 (5,4)	13.1 (5,9)	14.4 (6,5)
DN 100 / PN 40	12.6 (5,7)	13.3 (6,0)	14.5 (6,6)	15.8 (7,1)

Transmitter Option Weights

Option Code	Option	Add lb (kg)
1J, 1K, 1L	SST PlantWeb Housing	3.5 (1,6)
2J	SST Junction Box Housing	3.4 (1,5)
7J	SST Quick Connect	0.4 (0,2)
2A, 2B, 2C	Aluminum Junction Box Housing	1.1 (0,5)
1A, 1B, 1C	Aluminum PlantWeb Housing	1.1 (0,5)
M5	LCD Display for Aluminum PlantWeb Housing[1], LCD Display for SST PlantWeb Housing[1]	0.8 (0,4) 1.6 (0,7)
B4	SST Mounting Bracket for Coplanar Flange	1.2 (0,5)
B1, B2, B3	Mounting Bracket for Traditional Flange	1.7 (0,8)
B7, B8, B9	Mounting Bracket for Traditional Flange with SST Bolts	1.7 (0,8)
BA, BC	SST Bracket for Traditional Flange	1.6 (0,7)
B4	SST Mounting Bracket for In-Line	1.3 (0,6)
F12, F22	SST Traditional Flange with SST Drain Vents[2]	3.2 (1,5)
F13, F23	Cast C-276 Traditional Flange with Alloy C-276 Drain Vents[2]	3.6 (1,6)
E12, E22	SST Coplanar Flange with SST Drain Vents[2]	1.9 (0,9)
F14, F24	Cast Alloy 400 Traditional Flange with Alloy 400/K-500 Drain Vents[2]	3.6 (1,6)
F15, F25	SST Traditional Flange with Alloy C-276 Drain Vents[2]	3.2 (1,5)
G21	Level Flange—3 in., 150	12.6 (5,7)
G22	Level Flange—3 in., 300	15.9 (7,2)
G11	Level Flange—2 in., 150	6.8 (3,1)
G12	Level Flange—2 in., 300	8.2 (3,7)
G31	DIN Level Flange, SST, DN 50, PN 40	7.8 (3,5)
G41	DIN Level Flange, SST, DN 80, PN 40	13.0 (5,9)

(1) Includes LCD display and display cover.

(2) Includes mounting bolts.

Item	Weight in lb. (kg)
Aluminum Standard Cover	0.4 (0,2)
SST Standard Cover	1.3 (0,6)
Aluminum Display Cover	0.7 (0,3)
SST Display Cover	1.5 (0,7)
Wireless Extended Cover	0.7 (0,3)

Item	Weight in lb. (kg)
LCD Display[1]	0.1 (0,04)
Junction Box Terminal Block	0.2 (0,1)
PlantWeb Terminal Block	0.2 (0,1)
Power Module	0.5 (0,2)

(1) Display only.

Rosemount 3051S MultiVariable Certifications

Approved Manufacturing Locations

Rosemount Inc. — Chanhassen, Minnesota USA

Emerson Process Management GmbH & Co. — Wessling, Germany

Emerson Process Management Asia Pacific Private Limited — Singapore

Beijing Rosemount Far East Instrument Co., LTD — Beijing, China

Ordinary Location Certification for FM

As standard, the transmitter has been examined and tested to determine that the design meets basic electrical, mechanical, and fire protection requirements by FM, a nationally recognized testing laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

European Directive Information

The EC declaration of conformity for all applicable European directives for this product can be found at www.rosemount.com. A hard copy may be obtained by contacting an Emerson Process Management representative.

ATEX Directive (94/9/EC)

Emerson Process Management complies with the ATEX Directive.

European Pressure Equipment Directive (PED) (97/23/EC)

Models with Differential Pressure Ranges = 2 to 5 inclusive with Static Pressure = Range 4 only. P9 and P0 options also.
All other Model 3051SMV Pressure Transmitters
— Sound Engineering Practice

Transmitter Attachments: Diaphragm Seal - Process Flange - Manifold — Sound Engineering Practice

Primary Elements, Flowmeter
— See appropriate Primary Element QIG

Electro Magnetic Compatibility (EMC) (2004/108/EC)

EN 61326-1:2006 and EN 61326-2-3:2006

Hazardous Locations Certifications

North American Certifications

FM Approvals

E5 Explosion-proof for Class I, Division 1, Groups B, C, and D; dust-ignition proof for Class II and Class III, Division 1, Groups E, F, and G; hazardous locations; enclosure Type 4X, conduit seal not required.

I5 Intrinsically Safe for use in Class I, Division 1, Groups A, B, C, and D; Class II, Division 1, Groups E, F, and G; Class III, Division 1; Class I, Zone 0 AEx ia IIC when connected in accordance with Rosemount drawing 03151-1206;
Non-incendive for Class I, Division 2, Groups A, B, C, and D Enclosure Type 4X
For entity parameters see control drawing 03151-1206.

Canadian Standards Association (CSA)

All CSA hazardous approved transmitters are certified per ANSI/ISA 12.27.01-2003.

E6 Explosion-proof for Class I, Division 1, Groups B, C, and D; Dust-Ignition-Proof for Class II and Class III, Division 1, Groups E, F, and G; suitable for Class I, Division 2, Groups A, B, C, and D, CSA Enclosure Type 4X; conduit seal not required.

I6 Intrinsically Safe for Class I, Division 1, Groups A, B, C, and D when connected in accordance with Rosemount drawings 03151-1207;
For entity parameters see control drawing 03151-1207.

European Certifications

I1 ATEX Intrinsic Safety
Certificate No.: 08ATEX0064X ⟨Ex⟩ II 1G
Ex ia IIC T4 (T_a = -60 °C to 70 °C) -HART
CE 1180

Input Parameters

Loop / Power	Groups
U_i = 30 V	HART
I_i = 300 mA	HART
P_i = 1.0 W	HART
C_i = 14.8 nF	HART
L_i = 0	HART

Special conditions for safe use (x)

The apparatus is not capable of withstanding the 500V test as defined in Clause 6.3.12 of EN 60079-11. This must be considered during installation.

N1 ATEX Type n
Certificate No.: Baseefa 08ATEX0065X ⟨Ex⟩ II 3 G
Ex nA nL IIC T4 (T_a = -40 °C TO 70 °C)
Ui = 45 Vdc max
IP66
CE

Special conditions for safe use (x)

The apparatus is not capable of withstanding the 500V insulation test required by Clause 6.8.1 of EN 60079-15. This must be taken into account when installing the apparatus.

ND ATEX Dust
Certificate No.: BAS01ATEX1303X ⟨Ex⟩ II 1 D
T105°C (-20 °C ≤ T_{amb} ≤ 85 °C)
V_{max} = 42.4 volts max
A = 24 mA
IP66
CE 1180

Special conditions for safe use (x)

The user must ensure that the maximum rated voltage and current (42.4 volts, 22 milliampere, DC) are not exceeded. All connections to other apparatus or associated apparatus shall have control over this voltage and current equivalent to a category “ib” circuit according to EN 60079-11.

1. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
2. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
3. Cable entries and blanking plugs must be suitable for the ambient range of the apparatus and capable of withstanding a 7J impact test.
4. The 3051SMV must be securely screwed in place to maintain the ingress protection of the enclosure. (The 3051SMV SuperModule must be properly assembled to the 3051SMV housing to maintain ingress protection.)

E1 ATEX Flameproof
Certificate No.: KEMA 00ATEX2143X ⟨Ex⟩ II 1/2 G
Ex d IIC T6 (-50 °C ≤ T_{amb} ≤ 65 °C)
Ex d IIC T5 (-50 °C ≤ T_{amb} ≤ 80 °C)
V_{max} = 42.4V
CE 1180

Special conditions for safe use (x)

1. Appropriate ex d blanking plugs, cable glands, and wiring needs to be suitable for a temperature of 90 °C.
2. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer’s instructions for maintenance shall be followed in detail to assure safety during its expected lifetime.
3. The 3051SMV does not comply with the requirements of IEC 60079-1 Clause 5.2, Table 2 for all joints. Contact Emerson Process Management for information on the dimensions of flameproof joints.

Japanese Certifications

E4 TIIS Flameproof
Consult factory for availability

I4 TIIS Intrinsically Safe
Consult factory for availability

INMETRO Certifications

E2 INMETRO Flameproof
BR-Ex d IIC T6/T5

I2 INMETRO Intrinsic Safety
BR-Ex ia IIC T4

China (NEPSI) Certifications

E3 China Flameproof
Ex d II B+H_2T3~T5

I3 China Intrinsic Safety
Ex ia IIC T3/T4

IECEx Certifications

I7 IECEx Intrinsic Safety
Certificate No.: IECExBAS08.0025X
Ex ia IIC T4 (T_a = -60 °C to 70 °C) -HART
IP66

Input Parameters

Loop / Power	Groups
U_i = 30 V	HART
I_i = 300 mA	HART
P_i = 1.0 W	HART
C_i = 14.8 nF	HART
L_i = 0	HART

Special conditions for safe use (x)

The 3051SMV HART 4-20mA is not capable of withstanding the 500V test as defined in clause 6.3.12 of IEC 60079-11. This must be taken into account during installation.

N7 IECEx Type n
Certificate No.: IECExBAS08.0026X
Ex nAnL IIC T4 (Ta = -40 °C to 70 °C)
Ui = 45 Vdc MAX
IP66

Special conditions for safe use (x)

The apparatus is not capable of withstanding the 500 V insulation test required by Clause 6.8.1 of IEC 60079-15.

E7 IECEx Flameproof
Certificate No.: IECExKEM08.0010X
Ex d IIC T6 (-50 °C ≤ T_{amb} ≤ 65 °C)
Ex d IIC T5 (-50 °C ≤ T_{amb} ≤ 80 °C)
V_{max} = 42.4V

Special conditions for safe use (x)

1. Appropriate ex d blanking plugs, cable glands, and wiring needs to be suitable for a temperature of 90 °C.
2. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer’s instructions for maintenance shall be followed in detail to assure safety during its expected lifetime.
3. The 3051SMV does not comply with the requirements of IEC 60079-1 Clause 5.2, Table 2 for all joints. Contact Emerson Process Management for information on the dimensions of flameproof joints.

Combinations of Certifications

Stainless steel certification tag is provided when optional approval is specified. Once a device labeled with multiple approval types is installed, it should not be reinstalled using any other approval types. Permanently mark the approval label to distinguish it from unused approval types.

K1 Combination of E1, I1, N1, and ND
K2 Combination of E2 and I2
K4 Combination of E4 and I4
K5 Combination of E5 and I5
K6 Combination of E6 and I6
K7 Combination of E7, I7, and N7
KA Combination of E1, E6, I1, and I6
KB Combination of E5, E6, I5, and I6
KC Combination of E5, E1, I5 and I1
KD Combination of E5, E6, E1, I5, I6, and I1

Rosemount 3051S Certifications

Approved Manufacturing Locations

Rosemount Inc. — Chanhassen, Minnesota USA

Emerson Process Management GmbH & Co. — Wessling, Germany

Emerson Process Management Asia Pacific Private Limited — Singapore

Beijing Rosemount Far East Instrument Co., LTD — Beijing, China

Emerson Process Management LTDA — Sorocaba, Brazil

Emerson Process Management (India) Pvt. Ltd. — Daman, India

Ordinary Location Certification for FM

As standard, the transmitter has been examined and tested to determine that the design meets basic electrical, mechanical, and fire protection requirements by FM, a nationally recognized testing laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

European Directive Information

The EC declaration of conformity for all applicable European directives for this product can be found at www.rosemount.com. A hard copy may be obtained by contacting an Emerson Process Management representative.

ATEX Directive (94/9/EC)

Emerson Process Management complies with the ATEX Directive.

European Pressure Equipment Directive (PED) (97/23/EC)

Models 3051S_CA4; 3051S_CD2, 3, 4, 5; *(also with P9 option)*
Pressure Transmitters — QS Certificate of Assessment - EC No. PED-H-100, Module H Conformity Assessment

All other Model 3051S Pressure Transmitters — Sound Engineering Practice

Transmitter Attachments: Diaphragm Seal - Process Flange - Manifold — Sound Engineering Practice

Primary Elements, Flowmeter — See appropriate Primary Element QIG

Electro Magnetic Compatibility (EMC) (2004/108/EC)

EN 61326-1:1997 + A1, A2, and A3 – Industrial

Radio and Telecommunications Terminal Equipment Directive (R&TTE)(1999/5/EC)

Emerson Process Management complies with the R&TTE Directive.

HART & FOUNDATION Fieldbus Hazardous Locations Certifications

North American Certifications

FM Approvals

E5 Explosion-proof for Class I, Division 1, Groups B, C, and D; Dust Ignition-proof for Class II and Class III, Division 1, Groups E, F, and G; hazardous locations; enclosure Type 4X, conduit seal not required when installed according to Rosemount drawing 03151-1003.

I5/IE Intrinsically Safe for use in Class I, Division 1, Groups A, B, C, and D; Class II, Division 1, Groups E, F, and G; Class III, Division 1; Class I, Zone 0 AEx ia IIC when connected in accordance with Rosemount drawing 03151-1006;
Non-Incendive for Class I, Division 2, Groups A, B, C, and D
Enclosure Type 4X
For entity parameters see control drawing 03151-1006.

Canadian Standards Association (CSA)

All CSA hazardous approved transmitters are certified per ANSI/ISA 12.27.01-2003.

E6 Explosion-proof for Class I, Division 1, Groups B, C, and D; Dust Ignition-proof for Class II and Class III, Division 1, Groups E, F, and G; suitable for Class I, Division 2, Groups A, B, C, and D, when installed per Rosemount drawing 03151-1013, CSA Enclosure Type 4X; conduit seal not required.

I6/IF Intrinsically Safe for Class I, Division 1, Groups A, B, C, and D when connected in accordance with Rosemount drawings 03151-1016;
For entity parameters see control drawing 03151-1016.

European Certifications

I1/IA ATEX Intrinsic Safety
Certificate No.: BAS01ATEX1303X ⟨Ex⟩ II 1G
Ex ia IIC T4 (T_a = -60 °C to 70 °C) -HART/Remote Display/Quick Connect/HART Diagnostics
Ex ia IIC T4 (T_a = -60 °C to 70 °C) -FOUNDATION fieldbus
Ex ia IIC T4 (T_a = -60 °C to 40 °C) -FISCO
CE 1180

Input Parameters

Loop / Power	Groups
U_i = 30 V	HART / FOUNDATION fieldbus/ Remote Display / Quick Connect / HART Diagnostics
U_i = 17.5 V	FISCO
I_i = 300 mA	HART / FOUNDATION fieldbus/ Remote Display / Quick Connect / HART Diagnostics
I_i = 380 mA	FISCO
P_i = 1.0 W	HART / Remote Display / Quick Connect / HART Diagnostics
P_i = 1.3 W	FOUNDATION fieldbus
P_i = 5.32 W	FISCO
C_i = 30 nF	SuperModule Platform / Quick Connect
C_i = 11.4 nF	HART / HART Diagnostics
C_i = 0	FOUNDATION fieldbus / Remote Display / FISCO
L_i = 0	HART / FOUNDATION fieldbus/ FISCO / Quick Connect / HART Diagnostics
L_i = 60 µH	Remote Display

Special conditions for safe use (x)

1. The apparatus, excluding the Types 3051 S-T and 3051 S-C (In-line and Coplanar SuperModule Platforms respectively), is not capable of withstanding the 500V test as defined in Clause 6.4.12 of EN 50020. This must be considered during installation.
2. The terminal pins of the Types 3051 S-T and 3051 S-C must be protected to IP20 minimum.

N1 ATEX Type n
Certificate No.: BAS01ATEX3304X ⟨Ex⟩ II 3 G
EEx nAnL IIC T4 (T_a = -40 °C TO 70 °C)
Ui = 45 Vdc max
IP66
CE

Special conditions for safe use (x)
The apparatus is not capable of withstanding the 500V insulation test required by Clause 6.8.1 of EN 60079-15.
This must be taken into account when installing the apparatus.

ND ATEX Dust
Certificate No.: BAS01ATEX1374X ⟨Ex⟩ II 1 D
T105°C (-20 °C ≤ T_{amb} ≤ 85 °C)
V_{max} = 42.4 volts max
A = 22 mA
IP66
CE 1180

Special conditions for safe use (x)

1. The user must ensure that the maximum rated voltage and current (42.4 volts, 22 milliampere, DC) are not exceeded. All connections to other apparatus or associated apparatus shall have control over this voltage and current equivalent to a category “ib” circuit according to EN 50020.
2. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
3. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
4. Cable entries and blanking plugs must be suitable for the ambient range of the apparatus and capable of withstanding a 7J impact test.
5. The 3051S must be securely screwed in place to maintain the ingress protection of the enclosure. (The 3051S SuperModule must be properly assembled to the 3051S housing to maintain ingress protection.)

E1 ATEX Flameproof
Certificate No.: KEMA00ATEX2143X ⟨Ex⟩ II 1/2 G
Ex d IIC T6 (-50 °C ≤ T_{amb} ≤ 65 °C)
Ex d IIC T5 (-50 °C ≤ T_{amb} ≤ 80 °C)
V_{max} = 42.4V
CE 1180

Special conditions for safe use (x)

1. Appropriate ex d blanking plugs, cable glands, and wiring needs to be suitable for a temperature of 90 °C.
2. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer’s instructions for maintenance shall be followed in detail to assure safety during its expected lifetime.
3. The 3051S does not comply with the requirements of EN 60079-1 Clause 5.2, Table 2 for all joints. Contact Emerson Process Management for information on the dimensions of flameproof joints.

Japanese Certifications

E4 TIIS Flameproof
Ex d IIC T6

Certificate	Description
TC15682	Coplanar with Junction Box Housing
TC15683	Coplanar with PlantWeb Housing
TC15684	Coplanar with PlantWeb Housing and LCD Display
TC15685	In-Line SST with Junction Box Housing
TC15686	In-Line Alloy C-276 with Junction Box Housing
TC15687	In-Line SST with PlantWeb Housing
TC15688	In-Line Alloy C-276 with PlantWeb Housing
TC15689	In-Line SST with PlantWeb Housing and LCD Display
TC15690	In-Line Alloy C-276 with PlantWeb Housing and LCD Display
TC17102	Remote Display

China (NEPSI) Certifications

I3 China Intrinsic Safety
Certificate No. (manufactured in Chanhassen, MN): GYJ081078
Certificate No. (manufactured in Beijing, China): GYJ06367
Ex ia IIC T3~T5

Input Parameters

Loop / Power	Groups
U_i = 30 V	HART / FOUNDATION fieldbus/ Remote Display / Quick Connect / HART Diagnostics
U_i = 17.5 V	FISCO
I_i = 300 mA	HART / FOUNDATION fieldbus/ Remote Display / Quick Connect / HART Diagnostics
I_i = 380 mA	FISCO
P_i = 1.0 W	HART / Remote Display / Quick Connect / HART Diagnostics
P_i = 1.3 W	FOUNDATION fieldbus
P_i = 5.32 W	FISCO
C_i = 30 nF	SuperModule Platform / Quick Connect
C_i = 11.4 nF	HART / HART Diagnostics
C_i = 0	FOUNDATION fieldbus / Remote Display / FISCO
L_i = 0	HART / FOUNDATION fieldbus/ FISCO / Quick Connect / HART Diagnostics
L_i = 60 µH	Remote Display

E3 China Flameproof
Certificate No.: GYJ06366
Ex d IIB+H_2 T3~T5

INMETRO Certifications

I2 INMETRO Intrinsic Safety
Certificate No. (manufactured in Chanhassen, MN): CEPEL-Ex-0722/05X
Certificate No. (manufactured in Brazil): CEPEL-Ex-1414/07X
BR-Ex ia IIC T4 IP66W

E2 INMETRO Flameproof
Certificate No. (manufactured in Chanhassen, MN): CEPEL-Ex-140/2003X
Certificate No. (manufactured in Brazil): CEPEL-Ex-1413/07X
BR-Ex d IIC T5/T6 IP66W

IECEx Certifications

E7 IECEx Flameproof
Certificate No.: IECExKEM08.0010X
Ex d IIC T6 (-50 °C ≤ T_{amb} ≤ 65 °C)
Ex d IIC T5 (-50 °C ≤ T_{amb} ≤ 80 °C)
V_{max} = 42.4V

Special conditions for safe use (x)

1. Appropriate ex d blanking plugs, cable glands, and wiring needs to be suitable for a temperature of 90 °C.
2. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for maintenance shall be followed in detail to assure safety during its expected lifetime.
3. The 3051S does not comply with the requirements of IEC 60079-1 Clause 5.2, Table 2 for all joints. Contact Emerson Process Management for information on the dimensions of flameproof joints.

I7/IG IECEx Intrinsic Safety
Certificate No.: IECExBAS04.0017X
Ex ia IIC T4 (T_a = -60 °C to 70 °C) -HART/Remote Display/Quick Connect/HART Diagnostics
Ex ia IIC T4 (T_a = -60 °C to 70 °C) -FOUNDATION fieldbus
Ex ia IIC T4 (T_a = -60 °C to 40 °C) -FISCO
IP66

Input Parameters

Loop / Power	Groups
U_i = 30 V	HART / FOUNDATION fieldbus/ Remote Display / Quick Connect / HART Diagnostics
U_i = 17.5 V	FISCO
I_i = 300 mA	HART / FOUNDATION fieldbus/ Remote Display / Quick Connect / HART Diagnostics
I_i = 380 mA	FISCO
P_i = 1.0 W	HART / Remote Display / Quick Connect / HART Diagnostics
P_i = 1.3 W	FOUNDATION fieldbus
P_i = 5.32 W	FISCO
C_i = 30 nF	SuperModule Platform / Quick Connect
C_i = 11.4 nF	HART / HART Diagnostics
C_i = 0	FOUNDATION fieldbus / Remote Display / FISCO / Quick Connect / HART Diagnostics
L_i = 0	HART / FOUNDATION fieldbus / FISCO / Quick Connect / HART Diagnostics
L_i = 60 µH	Remote Display

Special conditions for safe use (x)

1. The Models 3051S HART 4-20mA, 3051S fieldbus, 3051S Profibus and 3051S FISCO are not capable of withstanding the 500V test as defined in clause 6.4.12 of IEC 60079-11. This must be taken into account during installation.
2. The terminal pins of the Types 3051S-T and 3051S-C must be protected to IP20 minimum.

N7 IECEx Type n
Certificate No.: IECExBAS04.0018X
Ex nC IIC T4 (T_a = -40 °C to 70 °C)
Ui = 45 Vdc MAX
IP66
Special conditions for safe use (x)
The apparatus is not capable of withstanding the 500 V insulation test required by Clause 8 of IEC 60079-15.

Combinations of Certifications

Stainless steel certification tag is provided when optional approval is specified. Once a device labeled with multiple approval types is installed, it should not be reinstalled using any other approval types. Permanently mark the approval label to distinguish it from unused approval types.

K1 Combination of E1, I1, N1, and ND
K2 Combination of E2 and I2
K5 Combination of E5 and I5
K6 Combination of E6 and I6
K7 Combination of E7, I7, and N7
KA Combination of E1, I1, E6, and I6
KB Combination of E5, I5, I6 and E6
KC Combination of E5, E1, I5 and I1
KD Combination of E5, I5, E6, I6, E1, and I1

Rosemount 3051S Wireless Certifications

Approved Manufacturing Locations

Rosemount Inc. — Chanhassen, Minnesota USA
Emerson Process Management GmbH & Co. — Wessling, Germany
Emerson Process Management Asia Pacific Private Limited — Singapore
Beijing Rosemount Far East Instrument Co., LTD — Beijing, China
Emerson Process Management LTDA — Sorocaba, Brazil
Emerson Process Management (India) Pvt. Ltd. — Daman, India

Telecommunication Compliance

All wireless devices require certification to ensure that they adhere to regulations regarding the use of the RF spectrum. Nearly every country requires this type of product certification. Emerson is working with governmental agencies around the world to supply fully compliant products and remove the risk of violating country directives or laws governing wireless device usage.

FCC and IC Approvals

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: This device may not cause harmful interference this device and must accept any interference received, including interference that may cause undesired operation.

This device must be installed to ensure a minimum antenna separation distance of 20cm from all persons.

Ordinary Location Certification for FM

As standard, the transmitter has been examined and tested to determine that the design meets basic electrical, mechanical, and fire protection requirements by FM, a nationally recognized testing laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

European Directive Information

The EC declaration of conformity for all applicable European directives for this product can be found at www.rosemount.com. A hard copy may be obtained by contacting an Emerson Process Management representative.

ATEX Directive (94/9/EC)

Emerson Process Management complies with the ATEX Directive.

European Pressure Equipment Directive (PED) (97/23/EC)

Models 3051S_CA4; 3051S_CD2, 3, 4, 5; *(also with P9 option)*
Pressure Transmitters — QS Certificate of Assessment - EC No. PED-H-100, Module H Conformity Assessment

All other Model 3051S Pressure Transmitters — Sound Engineering Practice

Transmitter Attachments: Diaphragm Seal - Process Flange - Manifold — Sound Engineering Practice

Primary Elements, Flowmeter — See appropriate Primary Element QIG

Electro Magnetic Compatibility (EMC) (2004/108/EC)

EN 61326-1:1997 A1, A2, A3(1)
EN 61326-1:2006
EN 61326-2-3:2006

(1) Only applies to "Operating Frequency and Protocol" option code 1.

Radio and Telecommunications Terminal Equipment Directive (R&TTE)(1999/5/EC)

Emerson Process Management complies with the R&TTE Directive.

Hazardous Locations Certifications

North American Certifications

Factory Mutual (FM) Approvals

I5 FM Intrinsically Safe, Non-Incendive, and Dust Ignition-proof.
Intrinsically Safe for Class I/II/III, Division 1, Groups A, B, C, D, E, F, and G.
Zone Marking: Class I, Zone 0, AEx ia IIC
Temperature Codes T4 (T_{amb} = -50 to 70° C)
Non-Incendive for Class I, Division 2, Groups A, B, C, and D.
Dust Ignition-proof for Class II/III, Division 1, Groups E, F, and G.
Ambient temperature limits: -50 to 85° C
For use with Rosemount SmartPower options 00753-9220-0001 only.
Enclosure Type 4X / IP66

CSA - Canadian Standards Association

Process Sealing

All CSA hazardous approved transmitters are certified per ANSI/ISA 12.27.01-2003.

I6 CSA Intrinsically Safe
Intrinsically Safe for Class I, Division 1, Groups A, B, C, and D.
Temp Code T3C
Enclosure Type 4X / IP66
For use with Rosemount SmartPower options 00753-9220-0001 only.

European Certifications

I1 ATEX Intrinsic Safety
Certificate No.: BAS01ATEX1303X ⟨Ex⟩ II 1G
Ex ia IIC T4 (T_a = -60 °C to 70 °C)
IP66
For use with Rosemount SmartPower options
00753-9220-0001 only.
CE 1180

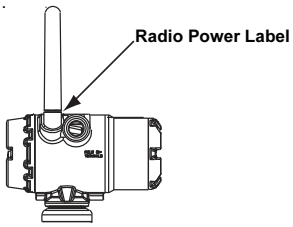
CE

Country(1)	Restriction
Bulgaria	General authorization required for outdoor use and public service
France	Outdoor use limited to 10mW e.i.r.p.
Italy	If used outside of own premises, general authorization is required.
Norway	May be restricted in the geographical area within a radius of 20 km from the center of Ny-Alesund.
Romania	Use on a secondary basis. Individual license required.

(1) Only applies to "Operating Frequency and Protocol" option code 1.

Radio Power Label (See Figure 1) indicates output power configuration of the radio. Devices with this label are configured for output power less than 10 mW e.i.r.p. At time of purchase the customer must specify ultimate country of installation and operation.

Figure 1.



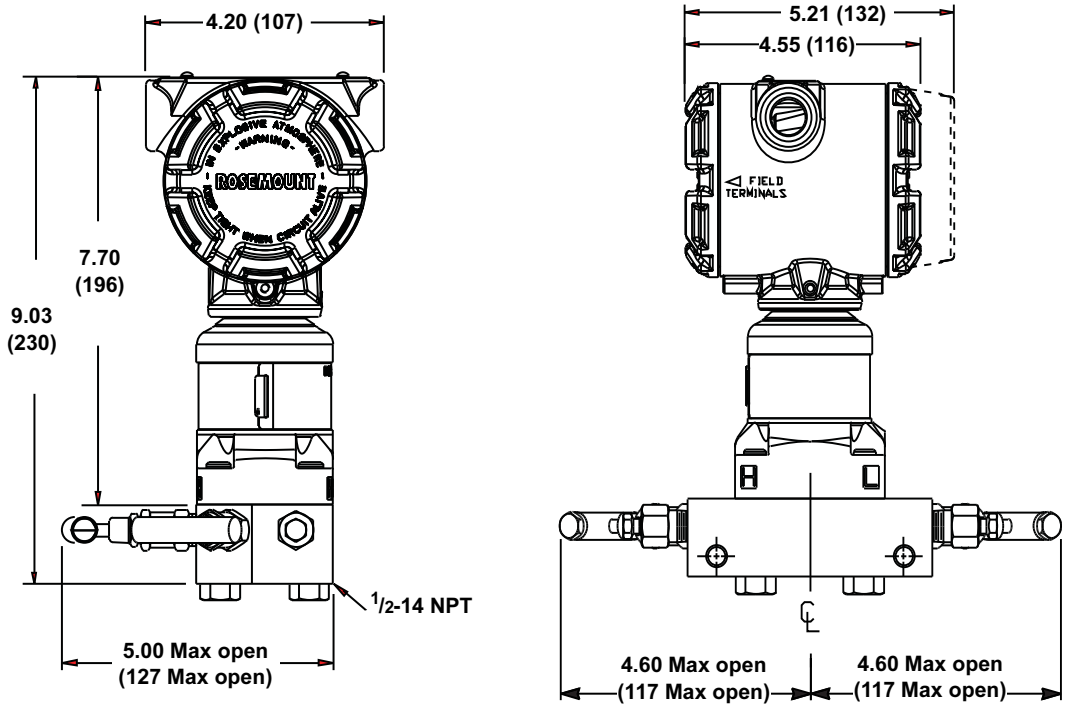
IECEx Certifications

I7 IECEx Intrinsic Safety
Certificate No.: IECEx BAS 04.0017X
Ex ia IIC T4 (Ta = -60 °C to 70 °C)
For use with Rosemount SmartPower options
00753-9220-0001 only.
IP66

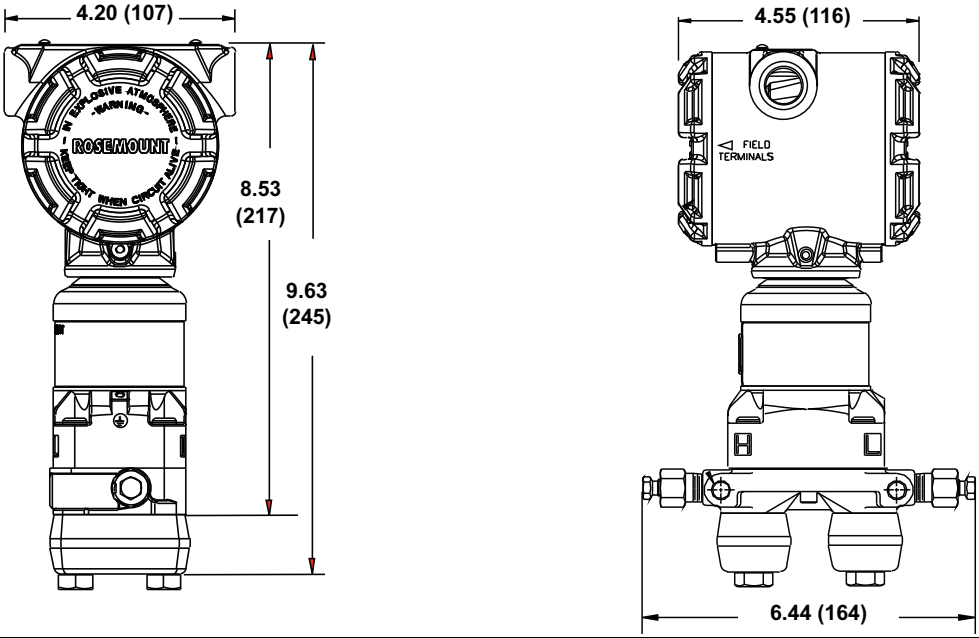
Dimensional Drawings

Dimensions are in inches (millimeters).
Process adapters (option D2) and Rosemount 305 integral manifolds must be ordered with the transmitter.

PlantWeb Housing with Coplanar SuperModule Platform and 305 Coplanar Integral Manifold

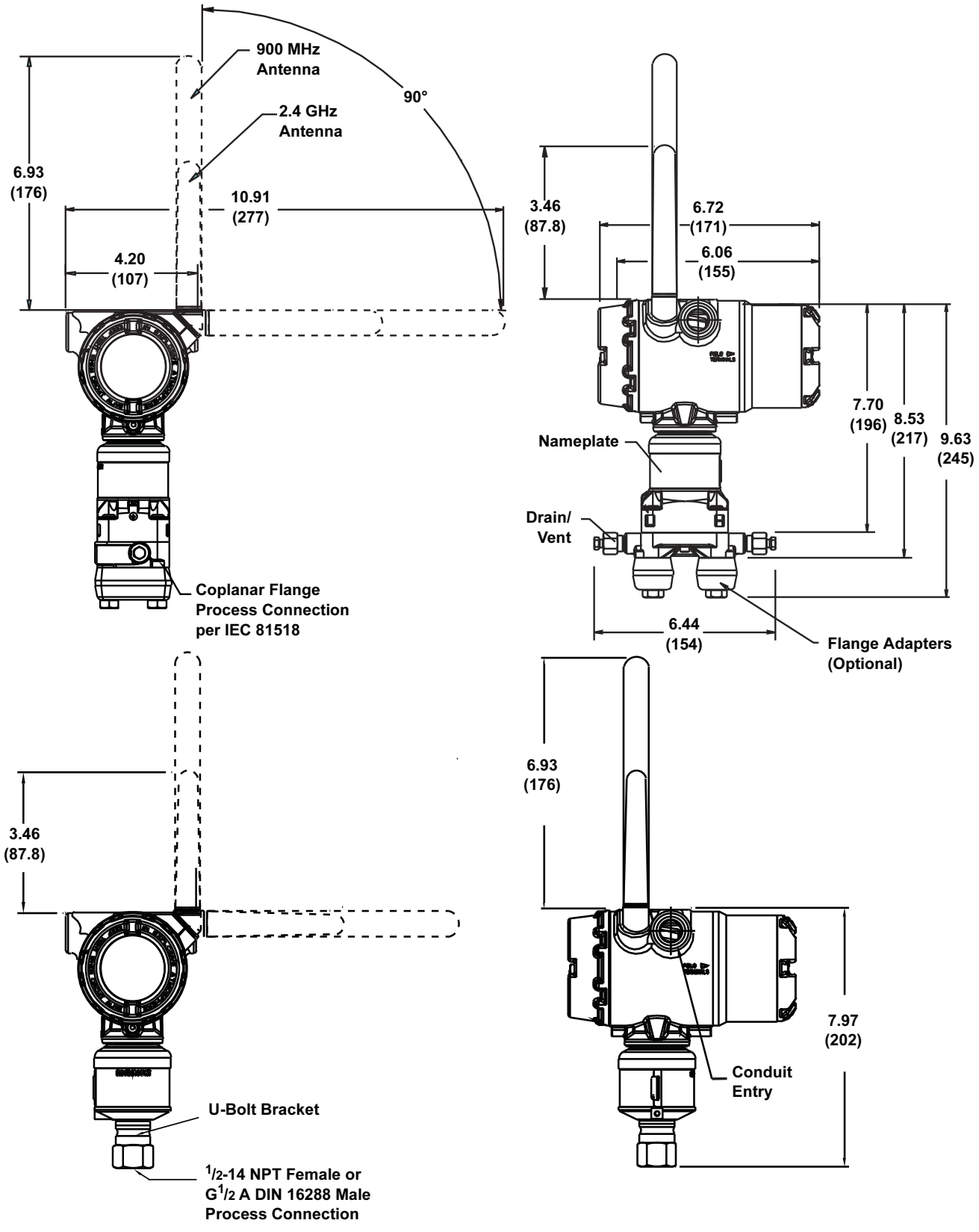


PlantWeb Housing with Coplanar SuperModule Platform and Coplanar Flange



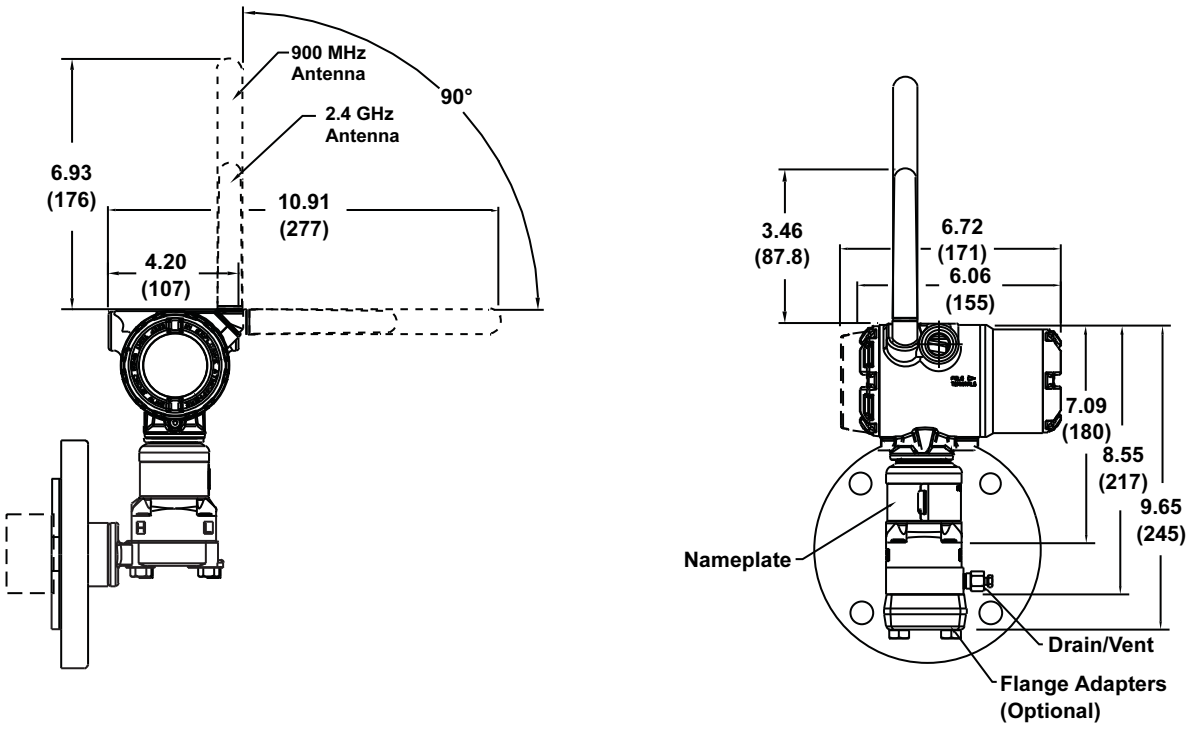
Dimensions are in inches (millimeters).

Wireless PlantWeb Housing with In-Line and Coplanar SuperModule Platform



Dimensions are in inches (millimeters).

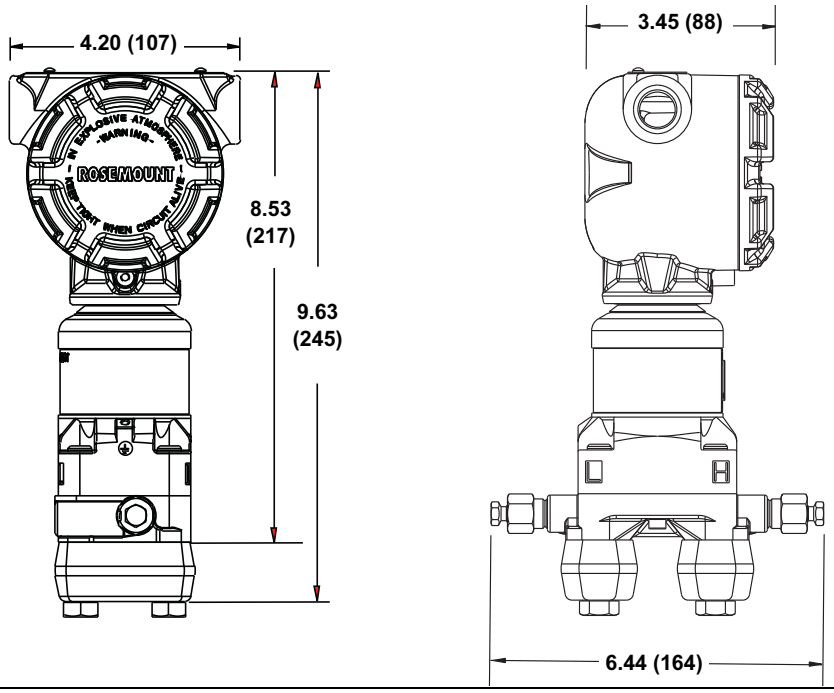
Wireless PlantWeb Housing with 3051S_L Liquid Level



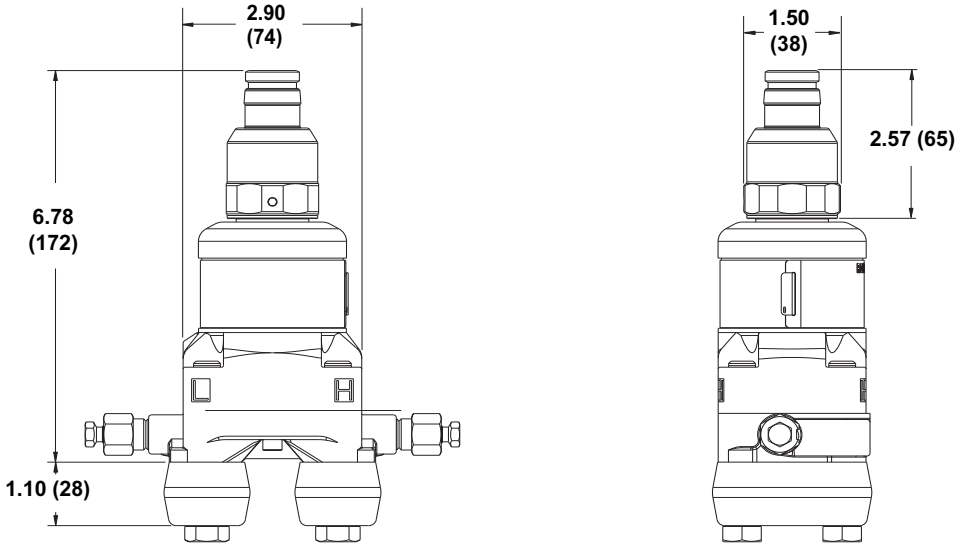
.

Dimensions are in inches (millimeters).

Junction Box Housing with Coplanar SuperModule Platform and Coplanar Flange



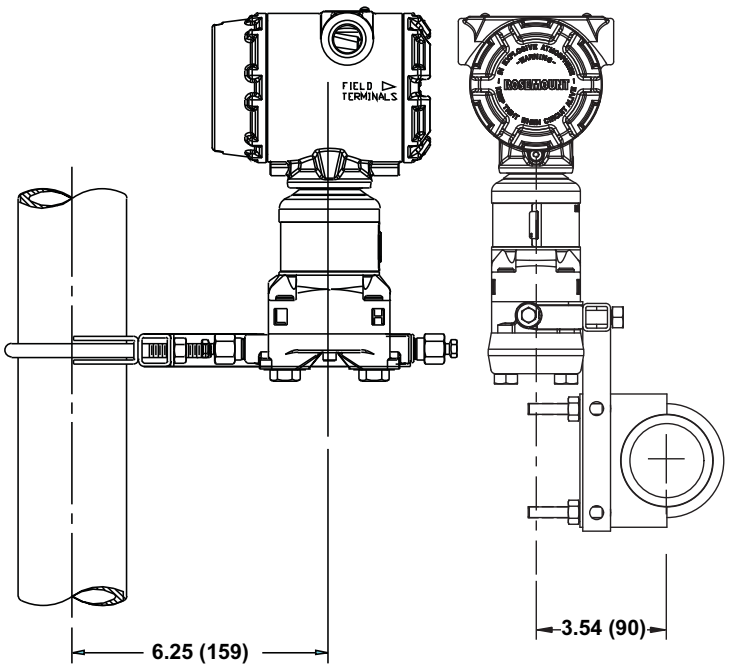
Quick Connect with Coplanar SuperModule Platform and Coplanar Flange



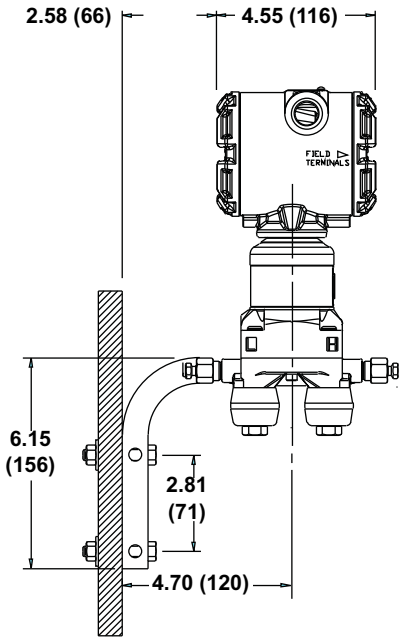
Dimensions are in inches (millimeters).

Coplanar Flange Mounting Configurations

Pipe Mount

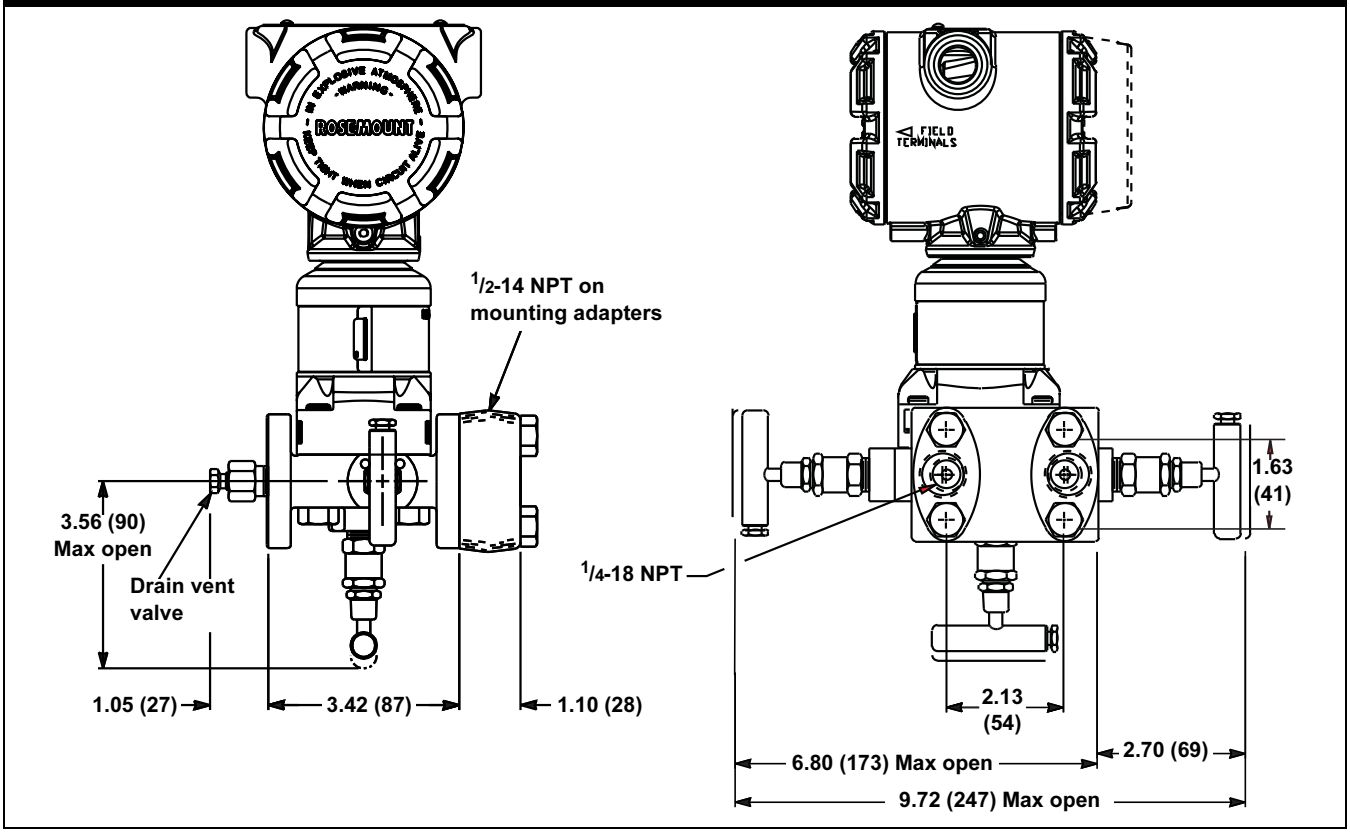


Panel Mount



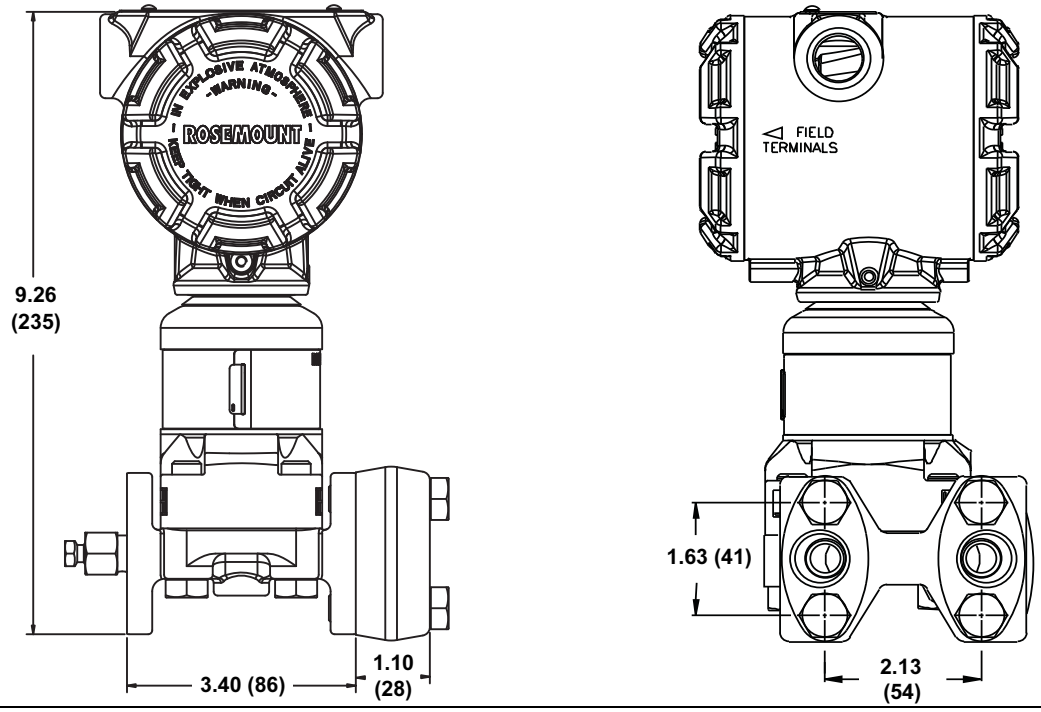
Dimensions are in inches (millimeters).

PlantWeb Housing with Coplanar SuperModule Platform and 305 Traditional Integral Manifold



Dimensions are in inches (millimeters).

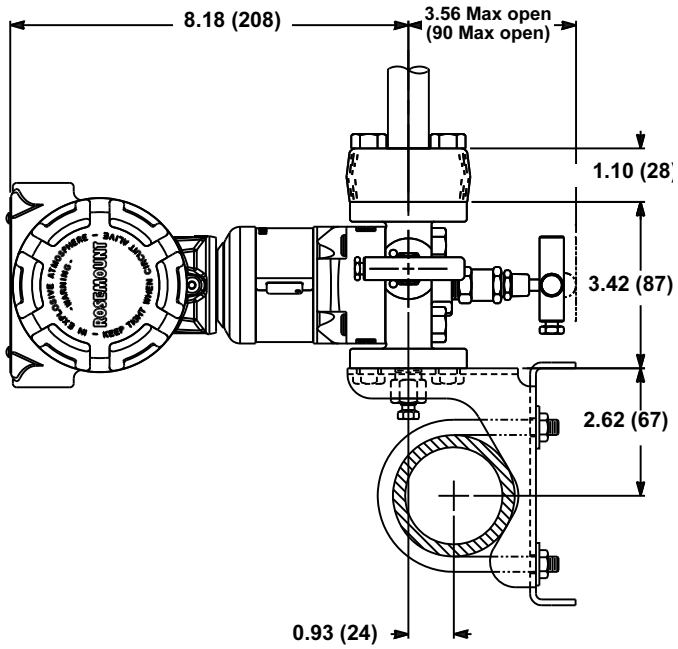
PlantWeb Housing with Coplanar SuperModule Platform and Traditional Flange

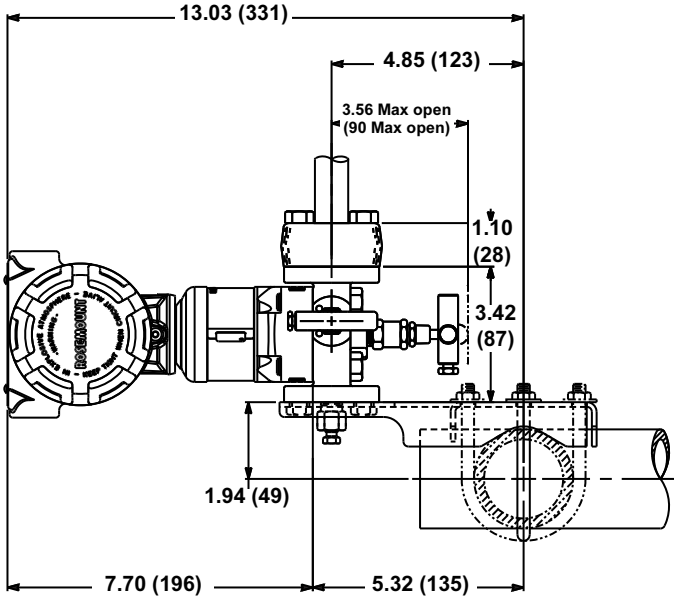


Dimensions are in inches (millimeters).

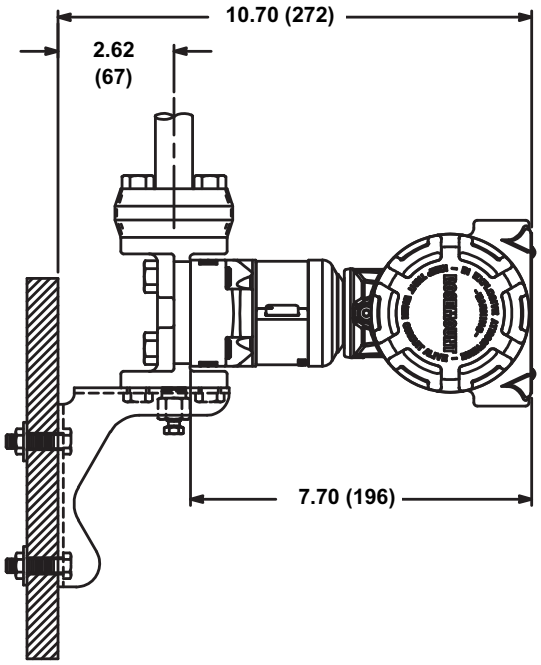
Traditional Flange Mounting Configurations

Pipe Mount 305 Integral Manifold





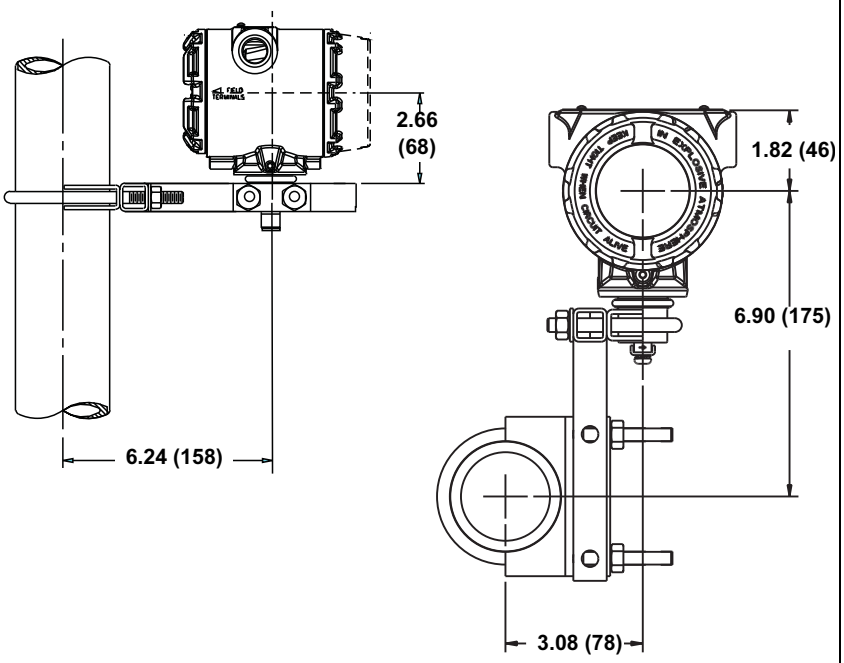
Panel Mount



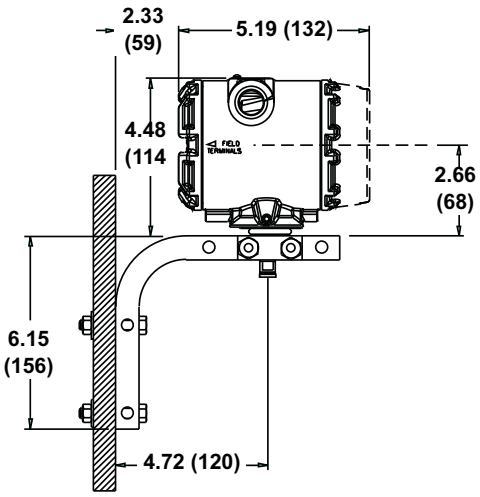
Dimensions are in inches (millimeters).

Remote Mount LCD Display and Interface Mounting Configurations

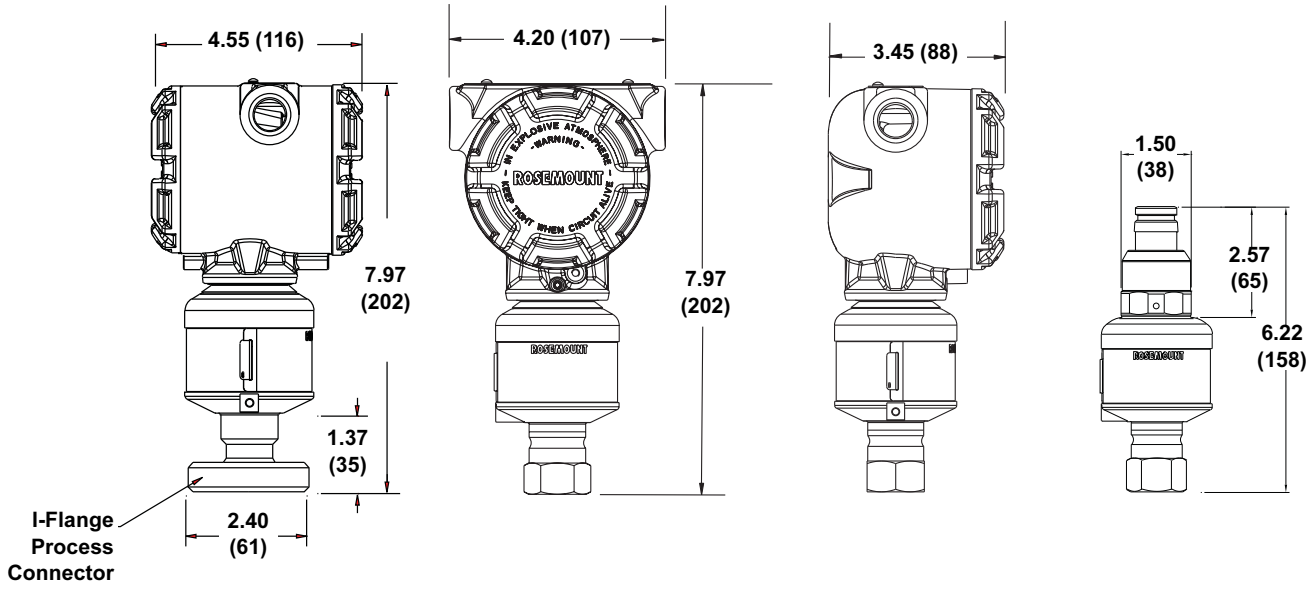
Pipe Mount



Panel Mount



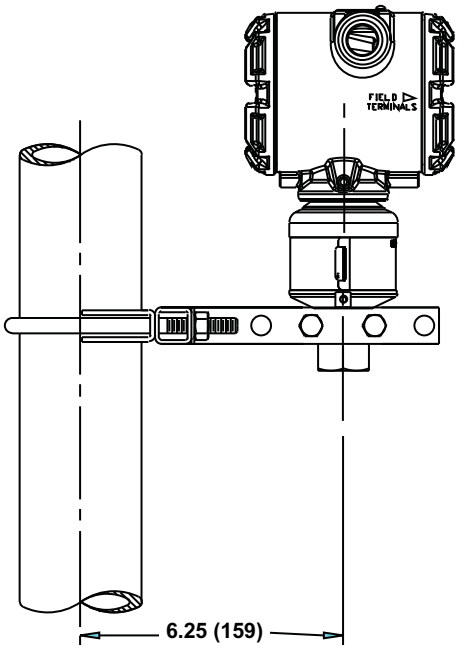
PlantWeb Housing, Junction Box Housing, and Quick Connect with In-Line SuperModule Platform

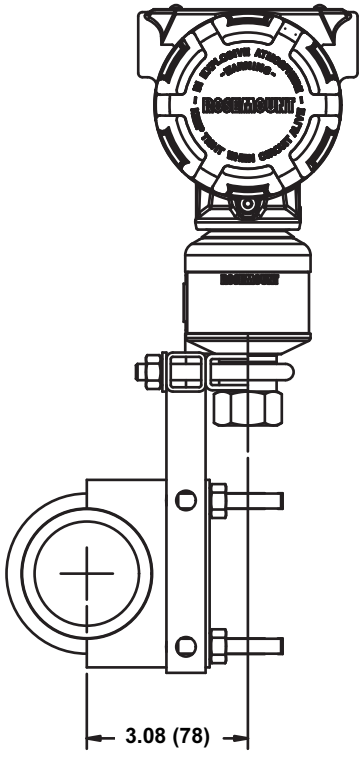


Dimensions are in inches (millimeters).

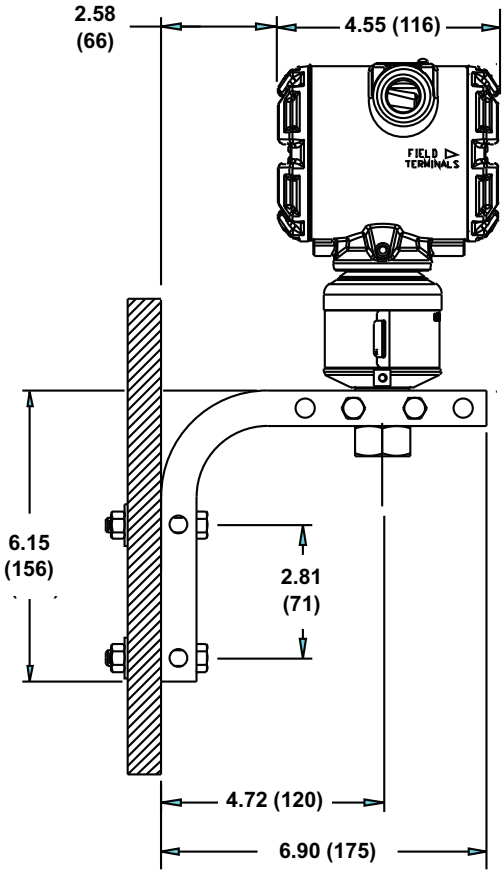
In-line Mounting Configurations with Optional Mounting Bracket

Pipe Mount





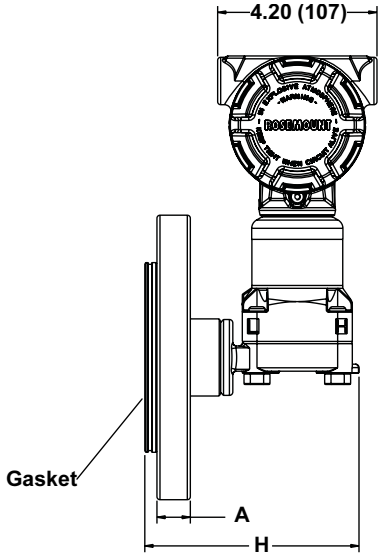
Panel Mount



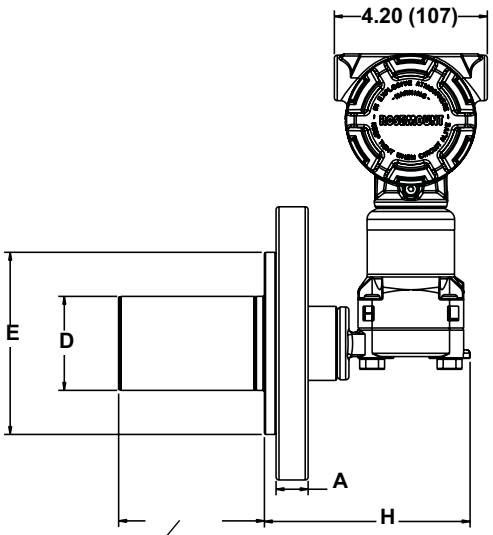
Dimensions are in inches (millimeters).

3051S_L Liquid Level

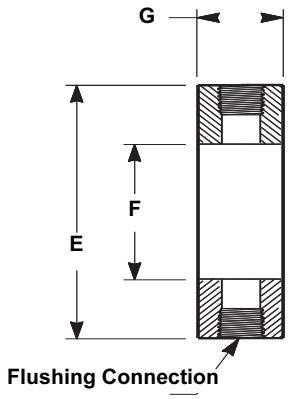
Flush Flanged Configuration



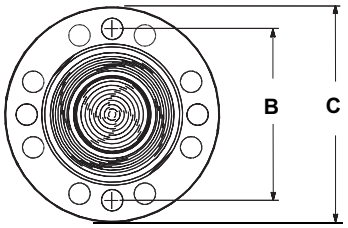
Extended Flanged Configuration

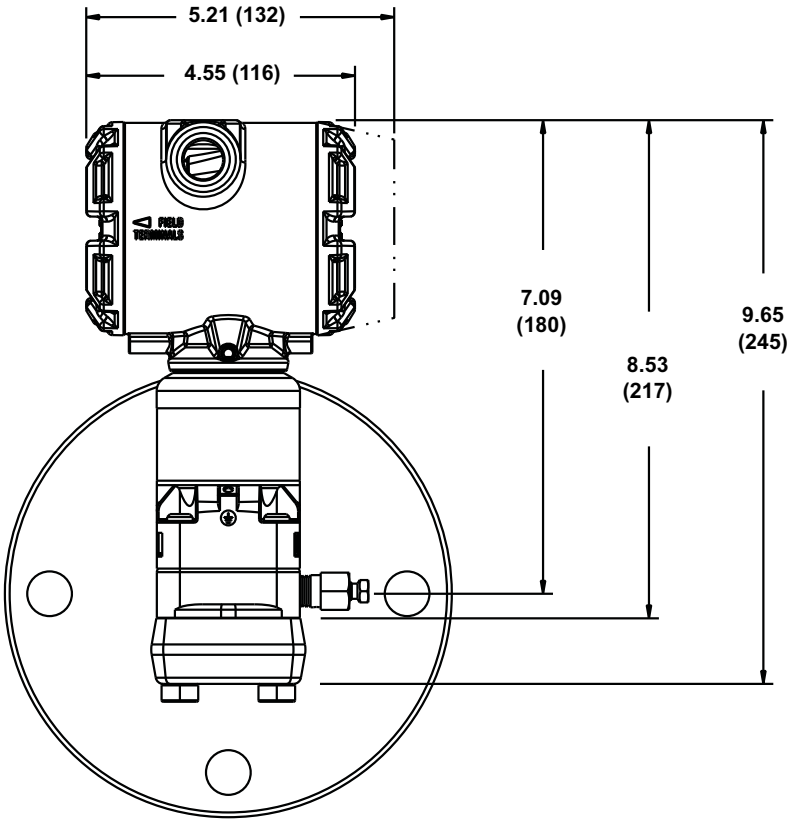


Optional Flushing Connection Ring (Lower Housing)



Diaphragm Assembly and Mounting Flange





3051S_L Dimensional Specifications

Except where indicated, dimensions are in inches (millimeters).

Class	Pipe Size	Flange Thickness A	Bolt Circle Diameter B	Outside Diameter C	No. of Bolts	Bolt Hole Diameter	Extension Diameter(1) D	O.D. Gasket Surface E
ASME B16.5 (ANSI) 150	2 (51)	0.69 (18)	4.75 (121)	6.0 (152)	4	0.75 (19)	N/A	3.6 (92)
	3 (76)	0.88 (22)	6.0 (152)	7.5 (191)	4	0.75 (19)	2.58 (66)	5.0 (127)
	4 (102)	0.88 (22)	7.5 (191)	9.0 (229)	8	0.75 (19)	3.5 (89)	6.2 (158)
ASME B16.5 (ANSI) 300	2 (51)	0.82 (21)	5.0 (127)	6.5 (165)	8	0.75 (19)	N/A	3.6 (92)
	3 (76)	1.06 (27)	6.62 (168)	8.25 (210)	8	0.88 (22)	2.58 (66)	5.0 (127)
	4 (102)	1.19 (30)	7.88 (200)	10.0 (254)	8	0.88 (22)	3.5 (89)	6.2 (158)
ASME B16.5 (ANSI) 600	2 (51)	1.00 (25)	5.0 (127)	6.5 (165)	8	0.75 (19)	N/A	3.6 (92)
	3 (76)	1.25 (32)	6.62 (168)	8.25 (210)	8	0.88 (22)	2.58 (66)	5.0 (127)
DIN 2501 PN 10–40	DN 50	20 mm	125 mm	165 mm	4	18 mm	N/A	4.0 (102)
DIN 2501 PN 25/40	DN 80	24 mm	160 mm	200 mm	8	18 mm	65 mm	5.4 (138)
	DN 100	24 mm	190 mm	235 mm	8	22 mm	89 mm	6.2 (158)
DIN 2501 PN 10/16	DN 100	20 mm	180 mm	220 mm	8	18 mm	89 mm	6.2 (158)

Class	Pipe Size	Process Side F	Lower Housing G		H
			1/4 NPT	1/2 NPT	
ASME B16.5 (ANSI) 150	2 (51)	2.12 (54)	0.97 (25)	1.31 (33)	5.65 (143)
	3 (76)	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)
	4 (102)	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)
ASME B16.5 (ANSI) 300	2 (51)	2.12 (54)	0.97 (25)	1.31 (33)	5.65 (143)
	3 (76)	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)
	4 (102)	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)
ASME B16.5 (ANSI) 600	2 (51)	2.12 (54)	0.97 (25)	1.31 (33)	7.65 (194)
	3 (76)	3.6 (91)	0.97 (25)	1.31 (33)	7.65 (194)
DIN 2501 PN 10–40	DN 50	2.4 (61)	0.97 (25)	1.31 (33)	5.65 (143)
DIN 2501 PN 25/40	DN 80	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)
	DN 100	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)
DIN 2501 PN 10/16	DN 100	3.6 (91)	0.97 (25)	1.31 (33)	5.65 (143)

(1) Tolerances are 0.040 (1,02), –0.020 (0,51).

Ordering Information

Rosemount 3051S MultiVariable Transmitter

Model	Transmitter Type
3051SMV	MultiVariable Transmitter

Code	Performance Class
3051SMV MultiVariable SuperModule, Measurement Types 1 and 2	
3	Ultra for Flow: 0.04 % reading DP accuracy, 200:1 rangedown,10-year stability, 12-year limited warranty
5	Classic MV: 0.04% span DP accuracy, 100:1 rangedown, 5-year stability
3051SMV Single Variable SuperModule, Measurement Types 3 and 4	
1	Ultra: 0.025 % span DP accuracy, 200:1 rangedown, 10-year stability, 12-year limited warranty
2	Classic: 0.055 % span DP accuracy, 100:1 rangedown, 5-year stability
3	Ultra for Flow: 0.04 % reading DP accuracy, 200:1 rangedown,10-year stability, 12-year limited warranty

Code	MultiVariable Type
M	MultiVariable Measurement with Fully Compensated Mass and Energy Flow
P	MultiVariable Measurement with Direct Process Variable Output

Code	Measurement Type
1	Differential Pressure, Static Pressure, and Temperature
2	Differential Pressure and Static Pressure
3	Differential Pressure and Temperature
4	Differential Pressure

Code	Differential Pressure Range
0[1][2]	-3 to 3 inH_2O (-7,47 to 7,47 mbar)
1	-25 to 25 inH_2O (-62,2 to 62,2 mbar)
2	-250 to 250 inH_2O (-623 to 623 mbar)
3	-1000 to 1000 inH_2O (-2,5 to 2,5 bar)
4[1]	-300 to 300 psi (-20,7 to 20,7 bar)
5[1]	-2000 to 2000 psi (-137,9 to 137,9 bar)

Code	Static Pressure Type
N[3]	None
A	Absolute
G	Gage

Code	Static Pressure Range	Absolute	Gage
N[3]	None		
3	Range 3	0.5 to 800 psia (0,03 to 55,2 bar)	-14.2 to 800 psig (-0,98 to 55,2 bar)
4[4]	Range 4	0.5 to 3626 psia (0,03 to 250 bar)	-14.2 to 3626 psig (-0,98 to 250 bar)

Code	Temperature Input
N[5]	None
R[6]	RTD Input (Type Pt 100, -328 to 1562 °F (-200 to 850 °C))

Code	Isolating Diaphragm
2[7]	316L SST
3[7]	Alloy C-276
4	Alloy 400
5[8]	Tantalum
6	Gold-Plated Alloy 400 (includes Graphite-Filled PTFE O-ring)
7	Gold-Plated 316L SST

Code	Process Connection	Size	Material Type[9]		
			Flange Material	Drain Vent	Bolting
000	None				
A11[10]	Assemble to Rosemount 305/306 Integral Manifold				
A12[10]	Assemble to Rosemount 304 or AMF Manifold with SST Traditional Flange				
B11[10][11]	Assemble to one Rosemount 1199 Diaphragm Seal				
B12[10][11]	Assemble to two Rosemount 1199 Diaphragm Seals				
C11[10]	Assemble to Rosemount 405 Primary Element				
D11[10]	Assemble to Rosemount 1195 Integral Orifice and Rosemount 305 Integral Manifold				

			Flange Material	Drain Vent	Bolting
EA2[10]	Assemble to Rosemount Annubar Primary Element with Coplanar flange		SST	316 SST	
EA3[10]	Assemble to Rosemount Annubar Primary Element with Coplanar flange		Cast C-276	Alloy C-276	
EA5[10]	Assemble to Rosemount Annubar Primary Element with Coplanar flange		SST	Alloy C-276	
E11	Coplanar flange	1/4–18 NPT	Carbon Steel	316 SST	
E12	Coplanar flange	1/4–18 NPT	SST	316 SST	
E13[7]	Coplanar flange	1/4–18 NPT	Cast C-276	Alloy C-276	
E14	Coplanar flange	1/4–18 NPT	Cast Alloy 400	Alloy 400/K-500	
E15[7]	Coplanar flange	1/4–18 NPT	SST	Alloy C-276	
E16[7]	Coplanar flange	1/4–18 NPT	Carbon Steel	Alloy *C-276*	
E21	Coplanar flange	RC 1/4	Carbon Steel	316 SST	
E22	Coplanar flange	RC 1/4	SST	316 SST	
E23[7]	Coplanar flange	RC 1/4	Cast C-276	Alloy C-276	
E24	Coplanar flange	RC 1/4	Cast Alloy 400	Alloy 400/K-500	
E25[7]	Coplanar flange	RC 1/4	SST	Alloy C-276	
E26[7]	Coplanar flange	RC 1/4	Carbon Steel	Alloy C-276	
F12	Traditional flange	1/4–18 NPT	SST	316 SST	
F13[7]	Traditional flange	1/4–18 NPT	Cast C-276	Alloy C-276	
F14	Traditional flange	1/4–18 NPT	Cast Alloy 400	Alloy 400/K-500	
F15[7]	Traditional flange	1/4–18 NPT	SST	Alloy C-276	
F22	Traditional flange	RC 1/4	SST	316 SST	
F23[7]	Traditional flange	RC 1/4	Cast C-276	Alloy C-276	
F24	Traditional flange	RC 1/4	Cast Alloy 400	Alloy 400/K-500	
F25[7]	Traditional flange	RC 1/4	SST	Alloy C-276	
F32	Bottom vent traditional flange	1/4–18 NPT	SST	316 SST	
F42	Bottom vent traditional flange	RC 1/4	SST	316 SST	
F52	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	7/16-in. bolting
F62	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	M10 bolting
F72	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	M12 bolting
G11	Vertical mount level flange	2-in. ANSI class 150	SST		
G12	Vertical mount level flange	2-in. ANSI class 300	SST		
G14[7]	Vertical mount level flange	2-in. ANSI class 150	Cast C-276		
G15[7]	Vertical mount level flange	2-in. ANSI class 300	Cast C-276		
G21	Vertical mount level flange	3-in. ANSI class 150	SST		
G22	Vertical mount level flange	3-in. ANSI class 300	SST		
G24[7]	Vertical mount level flange	3-in. ANSI class 150	Cast C-276		
G25[7]	Vertical mount level flange	3-in. ANSI class 300	Cast C-276		
G31	Vertical mount level flange	DIN- DN 50 PN 40	SST		
G41	Vertical mount level flange	DIN- DN 80 PN 40	SST		

Code	Output
A	4–20 mA with digital signal based on HART protocol

Code	Housing Style	Material[7]	Conduit Entry Size
1A	PlantWeb housing	Aluminum	1/2–14 NPT
1B	PlantWeb housing	Aluminum	M20 x 1.5 (CM20)
1C	PlantWeb housing	Aluminum	G1/2
1J	PlantWeb housing	SST	1/2–14 NPT
1K	PlantWeb housing	SST	M20 x 1.5 (CM20)
1L	PlantWeb housing	SST	G1/2

Code	Options
RTD Cable (RTD Sensor must be ordered separately)	
C12	RTD Input with 12 ft. (3.66 m) of Shielded Cable
C13	RTD Input with 24 ft. (7.32 m) of Shielded Cable
C14	RTD Input with 75 ft. (22.86 m) of Shielded Cable
C20[12]	RTD Input with 27 in. (69 cm) of Armored Shielded Cable
C21	RTD Input with 4 ft. (1.22 m) of Armored Shielded Cable
C22	RTD Input with 12 ft. (3.66 m) of Armored Shielded Cable
C23	RTD Input with 24 ft. (7.32 m) of Armored Shielded Cable
C24	RTD Input with 75 ft. (22.86 m) of Armored Shielded Cable
C30[12]	RTD Input with 25 in. (64 cm) of ATEX/IECEx Flameproof Cable
C32	RTD Input with 12 ft. (3.66 m) of ATEX/IECEx Flameproof Cable

C33	RTD Input with 24 ft. (7.32 m) of ATEX/IECEx Flameproof Cable
C34	RTD Input with 75 ft. (22.86 m) of ATEX/IECEx Flameproof Cable
C40[12]	RTD Input with 34 in. (86.36 cm) Shielded Cable and 24 in. (60.96 cm) FM Approved Coupling Flex
C41[12]	RTD Input with 40 in. (101.60 cm) Shielded Cable and 30 in. (76.20 cm) FM Approved Coupling Flex
Mounting Brackets[13]	
B4	Coplanar flange bracket, all SST, 2-in. pipe and panel
B1	Traditional flange bracket, Carbon Steel, 2-in. pipe
B2	Traditional flange bracket, Carbon Steel, panel
B3	Traditional flange flat bracket, Carbon Steel, 2-in. pipe
B7	Traditional flange bracket, B1 with SST bolts
B8	Traditional flange bracket, B2 with SST bolts
B9	Traditional flange bracket, B3 with SST bolts
BA	Traditional flange bracket, B1, all SST
BC	Traditional flange bracket, B3, all SST
Special Configuration (Software)	
C1	Custom software configuration *Note: A Configuration Data Sheet must be completed, see document number 00806-0100-4803.*
C2	Custom flow configuration *Note: A Custom Fluid Data Sheet must be completed, see document number 00806-0200-4803.*
C4	NAMUR alarm and saturation levels, high alarm
C5	NAMUR alarm and saturation levels, low alarm
C6	Custom alarm and saturation signal levels, high alarm
C7	Custom alarm and saturation signal levels, low alarm
C8	Low alarm (standard Rosemount alarm and saturation levels)
Special Configuration (Hardware)	
D2[13]	1/2-14 NPT Process adapters
D9[13]	RC $^1/_2$ process adapters
D4	External ground screw assembly
D5[13]	Delete transmitter drain/vent valves (install plugs)
D7[13]	Coplanar flange without drain/vent ports
D8[13]	Ceramic drain/vent valves
Product Certifications	
E1	ATEX Flameproof
I1	ATEX Intrinsic Safety
N1	ATEX Type n
ND	ATEX Dust
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)
E4	TIIS Flameproof
I4	TIIS Intrinsic Safety
K4	TIIS Flameproof and Intrinsic Safety (combination E4 and I4)
E5	FM Explosion-proof, Dust Ignition-proof
I5	FM Intrinsically Safe, Division 2
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5 and I5)
E6	CSA Explosion-proof, Dust Ignition-proof, Division 2
I6	CSA Intrinsically Safe
K6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E6 and I6)
D3	Measurement Canada Accuracy Approval
E7	IECEx Flameproof, Dust Ignition-proof
I7	IECEx Intrinsic Safety
N7	IECEx Type n
K7	IECEx Flameproof, Dust Ignition-proof, Intrinsic Safety, and Type n (combination of E7, I7, and N7)
E2[14]	INMETRO Flameproof
I2[14]	INMETRO Intrinsic Safety
K2[14]	INMETRO Flameproof, Intrinsic Safety (combination of E2 and I2)
E3[14]	China Flameproof
I3[14]	China Intrinsic Safety
KA[15]	ATEX and CSA Explosion-proof, Intrinsically Safe, Division 2 (combination of E1, E6, I1, and I6)
KB	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5, E6, I5, and I6)
KC[15]	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination of E5, E1, I5, and I1)
KD[15]	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of E5, E6, E1, I5, I6, and I1)
DW[16]	NSF Drinking Water Certification

Alternate Materials of Construction	
L1	Inert sensor fill fluid (Differential and Gage sensors only) *Note: Silicone fill fluid is standard.*
L2	Graphite-filled PTFE O-ring
L4(13)	Austenitic 316 SST bolts
L5(7)(13)	ASTM A193, Grade B7M bolts
L6(13)	Alloy K-500 bolts
L7(7)(13)	ASTM A453, Class D, Grade 660 bolts
L8(13)	ASTM A193, Class 2, Grade B8M bolts
Digital Display	
M5	PlantWeb LCD Display
Special Procedures	
P1(17)	Hydrostatic testing with certificate
P2(13)	Cleaning for special services
P3(13)	Cleaning for less than 1PPM chlorine/fluorine
P9(1)	4500 psig (310 bar) static pressure limit
P0(1)(18)	6092 psig (420 bar) static pressure limit
Special Certifications	
Q4	Calibration Certificate
QG(14)	Calibration Certificate and GOST Verification Certificate
QP	Calibration Certificate and Tamper Evident Seal
Q8	Material Traceability Certification per EN 10204 3.1.B
Q16	Surface Finish Certification for Sanitary Remote Seals
QZ	Remote Seal System Performance Calculation Report
Terminal Blocks	
T1	Transient terminal block
Conduit Electrical Connector	
GE(19)	M12, 4-pin, Male Connector (*eurofast*®)
GM(19)	A size Mini, 4-pin, Male Connector (*minifast*®)
Cold Temperature	
BRR	-60 °F (-51 °C) Cold Temperature Start-up

Typical Model Number: 3051SMV 3 M 1 2 G 4 R 2 E12 A 1A B4 C2 M5

(1) Only available with Measurement Type codes 3 and 4.

(2) DP Range 0 is only available with traditional flange, 316L SST diaphragm material, and Bolting option L4.

(3) Required for Measurement Type codes 3 and 4.

(4) For Measurement Type 1 and 2 and DP range 1. Absolute limits are 0.5 to 2000 psi (0,03 to 137,9 bar). Gage limits are -14.2 to 2000 psig (-0,98 to 137,9 bar).

(5) Required for Measurement Type codes 2 and 4.

(6) Required for Measurement Type codes 1 and 3. RTD Sensor must be ordered separately.

(7) Materials of Construction comply with metallurgical requirements highlighted within NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments.

(8) Tantalum diaphragm material is only available for DP ranges 2-5.

(9) Material specified is cast as follows: CF-8M is the cast version of 316 SST, CF-3M is the cast version of 316L SST, CW-12MW is the cast version of Alloy C-276, M-30C is the cast version of Alloy 400. For housing, material is aluminum with polyurethane paint.

(10) "Assemble to" items are specified separately and require a completed model number.

(11) Consult an Emerson Process Management representative for performance specifications.

(12) For use with Flowmeters with integral RTDs.

(13) Not available with process connection option code A11.

(14) Contact an Emerson Process Management representative for availability.

(15) RTD cable not available with this option.

(16) Requires 316L SST diaphragm material, glass-filled PTFE O-ring (standard), and Process Connection code E12 or F12.

(17) Not available with DP range 0.

(18) Requires 316L SST or Alloy C-276 diaphragm material, assemble to Rosemount 305 Integral Manifold or DIN-compliant traditional flange process connection, and bolting option L8. Limited to differential pressure ranges 2-5.

(19) Available with Intrinsically Safe approvals only. For FM Intrinsically Safe, Non-Incendive approval (option code I5), install in accordance with Rosemount drawing 03151-1206 to maintain outdoor rating (NEMA 4X and IP66).

Rosemount 3051S Coplanar Differential, Gage, or Absolute Transmitter

Model	Transmitter Type				
3051S	Coplanar Pressure Transmitter				
Code	**Performance Class**				
1[1]	Ultra: 0.025% span accuracy, 200:1 rangedown, 10-year stability, 12-year limited warranty				
3[2]	Ultra for Flow: 0.04% reading accuracy, 200:1 rangedown, 10-year stability, 12-year limited warranty				
2	Classic: 0.055% span accuracy, 100:1 rangedown, 5-year stability				
Code	**Connection Type**				
C	Coplanar				
Code	**Measurement Type[3]**				
D	Differential				
G	Gage				
A	Absolute				
Code	**Pressure Range**				
	Differential	**Gage**		**Absolute**	
0A[4]	-3 to 3 inH_2O (-7,47 to 7,47 mbar)	N/A		0 to 5 psia (0 to 0,34 bar)	
1A	-25 to 25 inH_2O (-62,2 to 62,2 mbar)	-25 to 25 inH_2O (-62,2 to 62,2 mbar)		0 to 30 psia (0 to 2,06 bar)	
2A	-250 to 250 inH_2O (-623 to 623 mbar)	-250 to 250 inH_2O (-623 to 623 mbar)		0 to 150 psia (0 to 10,34 bar)	
3A	-1000 to 1000 inH_2O (-2,5 to 2,5 bar)	-393 to 1000 inH_2O (-0,98 to 2,5 bar)		0 to 800 psia (0 to 55,2 bar)	
4A	-300 to 300 psi (-20,7 to 20,7 bar)	-14.2 to 300 psig (-0,98 to 21 bar)		0 to 4000 psia (0 to 275,8 bar)	
5A	-2000 to 2000 psi (-137,9 to 137,9 bar)	-14.2 to 2000 psig (-0,98 to 137,9 bar)		N/A	
Code	**Isolating Diaphragm**				
2[5]	316L SST				
3[5]	Alloy C-276				
4	Alloy 400				
5[6]	Tantalum				
6	Gold-plated Alloy 400 *Note: Includes graphite-filled PTFE o-ring.*				
7	Gold-plated 316L SST				
Code	**Process Connection**	**Size**	**Material Type[7]**		
			Flange Material	**Drain Vent**	**Bolting**
000	None				
A11[8]	Assemble to Rosemount 305 Integral Manifold				
A12[8]	Assemble to Rosemount 304 or AMF Manifold and SST traditional flange				
B11[8][9]	Assemble to one Rosemount 1199 Diaphragm Seal				
B12[8][9]	Assemble to two Rosemount 1199 Diaphragm Seals				
C11[8]	Assemble to Rosemount 405 Primary Element				
D11[8]	Assemble to Rosemount 1195 integral orifice and Rosemount 305 Integral Manifold				
EA2[8]	Assemble to Rosemount Annubar Primary Element with Coplanar flange		SST	316 SST	
EA3[8]	Assemble to Rosemount Annubar Primary Element with Coplanar flange		Cast C-276	Alloy C-276	
EA5[8]	Assemble to Rosemount Annubar Primary Element with Coplanar flange		SST	Alloy C-276	
E11	Coplanar flange	1/4–18 NPT	CS	316 SST	
E12	Coplanar flange	1/4–18 NPT	SST	316 SST	
E13[5]	Coplanar flange	1/4–18 NPT	Cast C-276	Alloy C-276	
E14	Coplanar flange	1/4–18 NPT	Cast Alloy 400	Alloy 400/K-500	
E15[5]	Coplanar flange	1/4–18 NPT	SST	Alloy C-276	
E16[5]	Coplanar flange	1/4–18 NPT	CS	Alloy C-276	
E21	Coplanar flange	RC 1/4	CS	316 SST	
E22	Coplanar flange	RC 1/4	SST	316 SST	
E23[5]	Coplanar flange	RC 1/4	Cast C-276	Alloy C-276	
E24	Coplanar flange	RC 1/4	Cast Alloy 400	Alloy 400/K-500	
E25[5]	Coplanar flange	RC 1/4	SST	Alloy C-276	
E26[5]	Coplanar flange	RC 1/4	CS	Alloy C-276	
F12	Traditional flange	1/4–18 NPT	SST	316 SST	
F13[5]	Traditional flange	1/4–18 NPT	Cast C-276	Alloy C-276	
F14	Traditional flange	1/4–18 NPT	Cast Alloy 400	Alloy 400/K-500	

			Flange Material	Drain Vent	Bolting
F15[5]	Traditional flange	1/4–18 NPT	SST	Alloy C-276	
F22	Traditional flange	RC 1/4	SST	316 SST	
F23[5]	Traditional flange	RC 1/4	Cast C-276	Alloy C-276	
F24	Traditional flange	RC 1/4	Cast Alloy 400	Alloy 400/K-500	
F25[5]	Traditional flange	RC 1/4	SST	Alloy C-276	
F32	Bottom vent traditional flange	1/4–18 NPT	SST	316 SST	
F42	Bottom vent traditional flange	RC 1/4	SST	316 SST	
F52	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	7/16-in. bolting
F62	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	M10 bolting
F72	DIN-compliant traditional flange	1/4–18 NPT	SST	316 SST	M12 bolting
G11	Vertical mount level flange	2-in. ANSI class 150	SST	316 SST	
G12	Vertical mount level flange	2-in. ANSI class 300	SST	316 SST	
G14[5]	Vertical mount level flange	2-in. ANSI class 150	Cast C-276	Alloy C-276	
G15[5]	Vertical mount level flange	2-in. ANSI class 300	Cast C-276	Alloy C-276	
G21	Vertical mount level flange	3-in. ANSI class 150	SST	316 SST	
G22	Vertical mount level flange	3-in. ANSI class 300	SST	316 SST	
G24[5]	Vertical mount level flange	3-in. ANSI class 150	Cast C-276	Alloy C-276	
G25[5]	Vertical mount level flange	3-in. ANSI class 300	Cast C-276	Alloy C-276	
G31	Vertical mount level flange	DIN- DN 50 PN 40	SST	316 SST	
G41	Vertical mount level flange	DIN- DN 80 PN 40	SST	316 SST	

Code	Output[10]
A	4–20 mA with digital signal based on HART protocol
F[11]	FOUNDATION fieldbus protocol
X[12]	Wireless (Requires wireless options and wireless housing 5A)

Code	Housing Style	Material[7]	Conduit Entry Size
00	None (SuperModule Platform only, no housing included)		
01[13]	Assemble to Rosemount 753R Web-Based Monitoring Indicator		
1A	PlantWeb housing	Aluminum	1/2–14 NPT
1B	PlantWeb housing	Aluminum	M20 x 1.5 (CM20)
1C	PlantWeb housing	Aluminum	G1/2
1J	PlantWeb housing	SST	1/2–14 NPT
1K	PlantWeb housing	SST	M20 x 1.5 (CM20)
1L	PlantWeb housing	SST	G1/2
5A	Wireless PlantWeb housing	Aluminum	1/2–14 NPT
5J	Wireless PlantWeb housing	SST	1/2–14 NPT
2A	Junction Box housing	Aluminum	1/2–14 NPT
2B	Junction Box housing	Aluminum	M20 x 1.5 (CM20)
2C	Junction Box housing	Aluminum	G1/2
2J	Junction Box housing	SST	1/2–14 NPT
2E	Junction Box Housing with output for remote display and interface	Aluminum	1/2–14 NPT
2F	Junction Box Housing with output for remote display and interface	Aluminum	M20 x 1.5 (CM20)
2G	Junction Box Housing with output for remote display and interface	Aluminum	G1/2
2M	Junction Box Housing with output for remote display and interface	SST	1/2–14 NPT
7J[14]	Quick Connect (A size Mini, 4-pin male termination)	SST	

Code	Options
PlantWeb Control Functionality	
A01[15]	FOUNDATION fieldbus Advanced Control Function Block Suite
PlantWeb Diagnostic Functionality	
D01[15]	FOUNDATION fieldbus Diagnostics Suite
DA1[16]	HART Diagnostics Suite
PlantWeb Enhanced Measurement Functionality	
H01[15][17]	Fully Compensated Mass Flow Block

Code	Wireless Options - Select code from each wireless category (example: WA2WK1)
Wireless Burst Rate	
WA	User Configurable Burst Rate
Operating Frequency and Protocol	
1	2.4 GHz DSSS, HART
2	900 MHz FHSS, HART
3	2.4 GHz DSSS, WirelessHART

Omnidirectional Wireless Antenna	
WK	Long Range, Integral Antenna
SmartPower™	
1	Long-life Power Module Adapter, Intrinsically Safe NOTE: Long-life Power Module must be shipped separately, order Part No. 00753-9220-0001.
Code	**Options**
Mounting Brackets[18]	
B4	Coplanar flange bracket, all SST, 2-in. pipe and panel
B1	Traditional flange bracket, CS, 2-in. pipe
B2	Traditional flange bracket, CS, panel
B3	Traditional flange flat bracket, CS, 2-in. pipe
B7	Traditional flange bracket, B1 with SST bolts
B8	Traditional flange bracket, B2 with SST bolts
B9	Traditional flange bracket, B3 with SST bolts
BA	Traditional flange bracket, B1, all SST
BC	Traditional flange bracket, B3, all SST
Special Configuration (Software)	
C1[19]	Custom software configuration *Note: A Configuration Data Sheet must be completed, see document number 00806-0100-4801 for HART and 00806-0100-4802 for wireless.*
C2	Custom flow configuration *Note: Requires option code H01. A Configuration Data Sheet must be completed, see document number 00806-0100-4801.*
C3	Gage pressure calibration on Rosemount 3051S_CA4 only
C4[19][20]	NAMUR alarm and saturation levels, high alarm
C5[19][20]	NAMUR alarm and saturation levels, low alarm
C6[19][20]	Custom alarm and saturation signal levels, high alarm *Note: Requires option code C1, custom software configuration. A Configuration Data Sheet must be completed, see page 61.*
C7[19][20]	Custom alarm and saturation signal levels, low alarm *Note: Requires option code C1, custom software configuration. A Configuration Data Sheet must be completed, see page 61.*
C8[19][20]	Low alarm (standard Rosemount alarm and saturation levels)
Special Configuration (Hardware)	
D1[19][20]	Hardware adjustments (zero, span, alarm, security) *Note: Not available with housing style codes 00, 01, 2E, 2F, 2G, 2M, 5A, or 7J.*
D2[18]	1/2-14 NPT Process adapters
D4	External ground screw assembly
D5[18]	Delete transmitter drain/vent valves (install plugs)
D7[18]	Coplanar flange without drain/vent ports
D8[18]	Ceramic drain/vent valves
D9[18]	RC 1/2 process adapters
Product Certifications[21]	
E1	ATEX Flameproof
I1	ATEX Intrinsic Safety
IA	ATEX FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only
N1	ATEX Type n
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)
ND	ATEX Dust
E4	TIIS Flameproof
E5	FM Explosion-proof, Dust Ignition-proof
I5	FM Intrinsically Safe, Division 2
IE	FM FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5 and I5)
E6	CSA Explosion-proof, Dust Ignition-proof, Division 2
I6	CSA Intrinsically Safe
IF	CSA FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only
K6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E6 and I6)
D3[22]	Measurement Canada Accuracy Approval
E7	IECEx Flameproof, Dust Ignition-proof
I7	IECEx Intrinsic Safety
IG	IECEx FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only
N7	IECEx Type n
K7	IECEx Flameproof, Dust Ignition-proof, Intrinsic Safety, Type n (combination of E7, I7, and N7)

E2	INMETRO Flameproof
I2	INMETRO Intrinsic Safety
K2	INMETRO Flameproof, Intrinsic Safety
E3[23]	China Flameproof
I3[23]	China Intrinsic Safety
KA	ATEX and CSA Flameproof, Intrinsically Safe, Division 2 (combination of E1, E6, I1, and I6) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
KB	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5, E6, I5, and I6) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
KC	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination of E5, E1, I5, and I1) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
KD	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of E5, E6, E1, I5, I6, and I1) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
DW[24]	NSF Drinking Water Approval
Alternate Materials of Construction	
L1	Inert sensor fill fluid (differential and gage only) *Note: Silicone fill fluid is standard.*
L2	Graphite-filled PTFE o-ring
L4[18]	Austenitic 316 SST bolts
L5[5][18]	ASTM A193, Grade B7M bolts
L6[18]	Alloy K-500 bolts
L7[5][18]	ASTM A453, Class D, Grade 660 bolts
L8[18]	ASTM A193, Class 2, Grade B8M bolts
Digital Display[25]	
M5	PlantWeb LCD Display
M7[20][26]	Remote mount LCD display and interface, no cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output *Note: See the 3051S Reference Manual (document number 00809-0100-4801) for cable requirements.* *Contact an Emerson Process Management representative for additional information.*
M8[20][26][27]	Remote mount LCD display and interface, 50 ft. (15 m) cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output
M9[20][26][27]	Remote mount LCD display and interface, 100 ft. (31 m) cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output
Special Procedures	
P1[28]	Hydrostatic testing with certificate
P2[18]	Cleaning for special services
P3[18]	Cleaning for less than 1PPM chlorine/fluorine
P9	4500 psig (310 bar) static pressure limit (Rosemount 3051S_CD only)
P0[29]	6092 psig (420 bar) static pressure limit (Rosemount 3051S2CD only)
Special Certifications	
Q4	Calibration certificate
QP	Calibration certificate and tamper evident seal
Q8	Material traceability certification per EN 10204 3.1.B
QS[19][20]	Prior-use certificate of FMEDA Data
QT[30]	Safety-certified to IEC 61508 with certificate of FMEDA data
Q16	Surface finish certification for sanitary remote seals
QZ	Remote Seal System Performance Calculation Report
Terminal Blocks	
T1[31]	Transient terminal block
T2[32]	Terminal block with WAGO® spring clamp terminals
T3[32]	Transient terminal block with WAGO spring clamp terminals
Conduit Electrical Connector	
GE[33]	M12, 4-pin, Male Connector (*eurofast*®)
GM[33]	A size Mini, 4-pin, Male Connector (*minifast*®)

Typical Model Number: 3051S1CD 2A 2 E12 A 1A DA1 B4 M5

(1) Not available with Wireless Operating Frequency and Protocol option codes 1 or 2.

(2) Not available with Wireless Operating Frequency and Protocol option codes 1 or 2 or Housing code 01. This option is only available with range codes 2A and 3A, 316L SST or Alloy C-276 isolating diaphragm and silicone fill fluid.

(3) Performance Class code 3 is available with Measurement Type code D only.

(4) 3051S_CD0 is only available with traditional flange, 316L SST diaphragm material, and Bolting option L4.

(5) Materials of Construction comply with metallurgical requirements highlighted within NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments.

(6) Tantalum diaphragm material is only available for ranges 2A - 5A, differential and gage.

(7) Material specified is cast as follows: CF-8M is the cast version of 316 SST, CF-3M is the cast version of 316L SST, CW-12MW is the cast version of Alloy C-276, M-30C is the cast version of Alloy 400. For housing, material is aluminum with polyurethane paint.

(8) "Assemble to" items are specified separately and require a completed model number. Process connection option codes B12, C11, D11, EA2, EA3, and EA5 are only available on differential Measurement Type, code D.

(9) Consult an Emerson Process Management representative for performance specifications.

(10) For spare SuperModule Platforms, select output code A.

(11) Requires PlantWeb housing.

(12) Available approvals are FM Intrinsically Safe, Division 2 (option code I5), CSA Intrinsically Safe (option code I6), ATEX Intrinsic Safety (option code I1; only available with 2.4 GHz), and IECEx Intrinsic Safety (option code I7; only available with 2.4 GHz).

(13) Available with output code A only. Not available with approvals. See Rosemount 753R Product Data Sheet, 00813-0100-4379, to specify Web-Based Monitoring Indicator. Does not integrate into plant host systems.

(14) Available with output code A only. Available approvals are FM Intrinsically Safe, Division 2 (option code I5), ATEX Intrinsic Safety (option code I1), or IECEx Intrinsic Safety (option code I7). Contact an Emerson Process Management representative for additional information.

(15) Requires PlantWeb housing and output code F.

(16) Requires PlantWeb housing and output code A. Includes Hardware Adjustments as standard. Not available with option code QT.

(17) Requires Rosemount Engineering Assistant to configure.

(18) Not available with process connection option code A11.

(19) Not available with output code F or Housing code 01.

(20) Not available with output code X.

(21) Valid when SuperModule Platform and housing have equivalent approvals.

(22) Requires PlantWeb housing and Hardware Adjustments option code D1. Limited availability depending on transmitter type and range. Contact an Emerson Process Management representative for additional information.

(23) Contact an Emerson Process Management representative for availability.

(24) Requires 316L SST diaphragm material, glass-filled PTFE O-ring (standard), and Process Connection code E12 or F12.

(25) Not available with Housing code 01 or 7J.

(26) Not available with output code F, Housing code 01, option code DA1, or option code QT.

(27) Cable supplied is Belden 3084A, rated for ambient temperatures up to 167°F (75°C).

(28) P1 is not available with 3051S_CA0.

(29) Requires 316L SST or Alloy C-276 diaphragm material, assemble to Rosemount 305 integral manifold or DIN-compliant traditional flange process connection, and bolting option L8. Limited to Pressure Range (Differential), ranges 2A – 5A.

(30) Not available with output code F or X. Not available with housing code 01 or 7J.

(31) Not available with Housing code 00, 01, 5A, or 7J.

(32) Available with output code A and PlantWeb housing only.

(33) Not available with Housing code 00, 01, 5A, or 7J. Available with Intrinsically Safe approvals only. For FM Intrinsically Safe, Division 2 (option code I5) or FM FISCO Intrinsically Safe (option code IE), install in accordance with Rosemount drawing 03151-1009 to maintain outdoor rating (NEMA 4X and IP66).

Rosemount 3051S In-Line Gage or Absolute Transmitter

Model	Transmitter Type		
3051S	In-Line Pressure Transmitter		
Code	**Performance Class**		
1[1]	Ultra: 0.025% span accuracy, 200:1 rangedown, 10-year stability, 12-year limited warranty		
2	Classic: 0.055% span accuracy, 100:1 rangedown, 5-year stability		
Code	**Device Type**		
T	In-Line		
Code	**Measurement Type**		
G	Gage		
A	Absolute		
Code	**Pressure Range**		
	TG	**TA**	
1A	-14.7 to 30 psi (-1,0 to 2,1 bar)	0 to 30 psia (2,1 bar)	
2A	-14.7 to 150 psi (-1,0 to 10,3 bar)	0 to 150 psia (10,3 bar)	
3A	-14.7 to 800 psi (-1,0 to 55 bar)	0 to 800 psia (55 bar)	
4A	-14.7 to 4000 psi (-1,0 to 276 bar)	0 to 4000 psia (276 bar)	
5A	-14.7 to 10000 psi (-1,0 to 689 bar)	0 to 10000 psia (689 bar)	
Code	**Isolating Diaphragm / Process Connection Material**		
2[2]	316L SST		
3[2]	Alloy C-276		
Code	**Process Connection Style**		
A11[3]	Assemble to Rosemount 306 integral manifold		
B11[3][4]	Assemble to one Rosemount 1199 diaphragm seal		
E11	1/2–14 NPT female		
F11	Non-threaded instrument-flange (I-flange) (Range 1-4 only)		
G11	G1/2 A DIN 16288 male (Range 1-4 only)		
H11	Coned and threaded, compatible with autoclave type F-250-C (Range 5A only)		
Code	**Output[5]**		
A	4–20 mA with digital signal based on HART protocol		
F[6]	FOUNDATION fieldbus protocol		
X[7]	Wireless (Requires wireless options and wireless housing 5A)		
Code	**Housing Style**	**Materials[8]**	**Conduit Entry Size**
00	None (SuperModule Platform only, no housing included)		
01[9]	Assemble to Rosemount 753R Web-Based Monitoring Indicator		
1A	PlantWeb housing	Aluminum	1/2–14 NPT
1B	PlantWeb housing	Aluminum	M20 x 1.5 (CM20)
1C	PlantWeb housing	Aluminum	G1/2
1J	PlantWeb housing	SST	1/2–14 NPT
1K	PlantWeb housing	SST	M20 x 1.5 (CM20)
1L	PlantWeb housing	SST	G 1/2
5A	Wireless PlantWeb housing	Aluminum	1/2–14 NPT
5J	Wireless PlantWeb housing	SST	1/2–14 NPT
2A	Junction Box housing	Aluminum	1/2–14 NPT
2B	Junction Box housing	Aluminum	M20 x 1.5 (CM20)
2C	Junction Box housing	Aluminum	G 1/ 2
2J	Junction Box housing	SST	1/2–14 NPT
2E	Junction Box housing with output for remote interface	Aluminum	1/2–14 NPT
2F	Junction Box housing with output for remote interface	Aluminum	M20 x 1.5 (CM20)
2G	Junction Box housing with output for remote interface	Aluminum	G1/2
2M	Junction Box housing with output for remote interface	SST	1/2–14 NPT
7J[10]	Quick Connect (A size Mini, 4-pin male termination)	SST	

Code	Options
PlantWeb Control Functionality	
A01[11]	FOUNDATION fieldbus Advanced Control Function Block Suite
PlantWeb Diagnostic Functionality	
D01[11]	FOUNDATION fieldbus Diagnostics Suite
DA1[12]	HART Diagnostics Suite
Code	**Wireless Options - Select code from each wireless category (example: WA2WK1)**
Wireless Burst Rate	
WA	User Configurable Burst Rate
Operating Frequency and Protocol	
1	2.4 GHz DSSS, HART
2	900 MHz FHSS, HART
3	2.4 GHz DSSS, WirelessHART
Omnidirectional Wireless Antenna	
WK	Long Range, Integral Antenna
SmartPower™	
1	Long-life Power Module Adapter, Intrinsically Safe NOTE: Long-life Power Module must be shipped separately, order Part No. 00753-9220-0001.
Code	**Options**
Mounting Bracket	
B4	Bracket, all SST, 2-in. pipe and panel
Special Configuration (Software)[13]	
C1[13][14]	Custom software configuration *Note: A Configuration Data Sheet must be completed, see document number 00806-0100-4801 for HART and 00806-0100-4802 for wireless.*
C4[13][14]	NAMUR alarm and saturation values, high alarm
C5[13][14]	NAMUR alarm and saturation values, low alarm
C6[13][14]	Custom alarm and saturation signal levels, high alarm *Note: Requires option code C1, custom software configuration. A Configuration Data Sheet must be completed, see page 61.*
C7[13][14]	Custom alarm and saturation signal levels, low alarm *Note: Requires option code C1, custom software configuration. A Configuration Data Sheet must be completed, see page 61.*
C8[13][14]	Low alarm (Standard Rosemount alarm and saturation signal levels)
Special Configuration (Hardware)	
D1[13][14]	Hardware adjustments (zero, span, alarm, security) *Note: Not available with Housing Style codes 00, 01, 2E, 2F, 2G, 2M, 5A, or 7J.*
D4	External ground screw assembly
Product Certifications[15]	
E1	ATEX Flameproof
I1	ATEX Intrinsic Safety
IA	ATEX FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only
N1	ATEX Type n
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)
ND	ATEX Dust
E4	TIIS Flameproof
E5	FM Explosion-proof, Dust Ignition-proof
I5	FM Intrinsically Safe, Division 2
IE	FM FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5 and I5)
E6	CSA Explosion-proof, Dust Ignition-proof, Division 2
I6	CSA Intrinsically Safe
IF	CSA FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only
K6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E6 and I6)
D3[16]	Measurement Canada Accuracy Approval
E7	IECEx Flameproof, Dust Ignition-proof
I7	IECEx Intrinsic Safety
IG	IECEx FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only
N7	IECEx Type n
K7	IECEx Flameproof, Dust Ignition-proof, Intrinsic Safety, Type n (combination of E7, I7, and N7)
E2	INMETRO Flameproof
I2	INMETRO Intrinsic Safety

K2	INMETRO Flameproof, Intrinsic Safety
E3[17]	China Flameproof
I3[17]	China Intrinsic Safety
KA	ATEX and CSA Flameproof, Intrinsically Safe, Division 2 (combination of E1, E6, I1, and I6) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
KB	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5, E6, I5, and I6) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
KC	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination of E5, E1, I5, and I1) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
KD	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of E5, E6, E1, I5, I6, and I1) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*
DW[18]	NSF Drinking Water Approval
Alternate Materials of Construction	
L1	Inert sensor fill fluid *Note: Silicone fill fluid is standard.*
Digital Display[19]	
M5	PlantWeb LCD Display
M7[14][20]	Remote mount LCD display and interface, no cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output *Note: See the 3051S Reference Manual (document number 00809-0100-4801) for cable requirements.* *Contact an Emerson Process Management representative for additional information.*
M8[14][20][21]	Remote mount LCD display and interface, 50 ft. (15 m) cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output
M9[14][20][21]	Remote mount LCD display and interface, 100 ft. (31 m) cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output
Special Procedures	
P1	Hydrostatic testing with certificate
P2[22]	Cleaning for special services
P3[22]	Cleaning for less than 1 PPM chlorine/fluorine
Special Certifications	
Q4	Calibration certificate
QP	Calibration certificate and tamper evident seal
Q8	Material traceability certification per EN 10204 3.1.B
QS[13][14]	Prior-use certificate of FMEDA Data
QT[23]	Safety-certified to IEC 61508 with certificate of FMEDA data
Q16	Surface finish certification for sanitary remote seals
QZ	Remote Seal System Performance Calculation Report
Terminal Blocks	
T1[24]	Transient terminal block
T2[25]	Terminal block with WAGO® spring clamp terminals
T3[25]	Transient terminal block with WAGO spring clamp terminals
Conduit Electrical Connector	
GE[26]	M12, 4-pin, Male Connector (*eurofast*®)
GM[26]	A size Mini, 4-pin, Male Connector (*minifast*®)

Typical Model Number: 3051S1TG 2A 2 E11 A 1A DA1 B4 M5

(1) Not available with Wireless Operating Frequency and Protocol option codes 1 or 2.

(2) Materials of Construction comply with metallurgical requirements highlighted within NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments.

(3) "Assemble to" items are specified separately and require a completed model number.

(4) Contact an Emerson Process Management representative for performance specifications.

(5) For spare SuperModule Platforms, select output code A.

(6) Requires PlantWeb housing.

(7) Available approvals are FM Intrinsically Safe, Division 2 (option code I5), CSA Intrinsically Safe (option code I6), ATEX Intrinsic Safety (option code I1; only available with 2.4 GHz), and IECEx Intrinsic Safety (option code I7; only available with 2.4 GHz).

(8) Material specified is cast as follows: CF-3M is the cast version of 316L SST. For housing, material is aluminum with polyurethane paint.

(9) Available with output code A only. Not available with approvals. See Rosemount 753R Product Data Sheet, 00813-0100-4379, to specify Web-Based Monitoring Indicator. Does not integrate into plant host systems.

(10) Available with output code A only. Available approvals are FM Intrinsically Safe, Division 2 (option code I5), ATEX Intrinsic Safety (option code I1), or IECEx Intrinsic Safety (option code I7). Contact an Emerson Process Management representative for additional information.

(11) Requires PlantWeb *housing and output code F.*

(12) Requires PlantWeb housing and output code A. Includes Hardware Adjustments as standard. Not available with option code QT.

(13) Not available with output code F or Housing code 01.

(14) Not available with output code X.

(15) Valid when SuperModule Platform and housing have equivalent approvals.

(16) Requires PlantWeb housing and Hardware Adjustments option code D1. Limited availability depending on transmitter type and range. Contact an Emerson Process Management representative for additional information.

(17) Contact an Emerson Process Management representative for availability.

(18) Requires 316L SST diaphragm material and Process Connection code E11 or G11.

(19) Not available with Housing code 01 and 7J.

(20) Not available with output code F, Housing code 01, option code DA1, or option code QT.

(21) Cable supplied is Belden 3084A, rated for ambient temperatures up to 167°F (75°C).

(22) Not available with process connection option code A11.

(23) Not available with output code F or X. Not available with housing code 01 or 7J.

(24) Not available with Housing code 00, 01, 5A, or 7J.

(25) Available with output code A and PlantWeb housing only.

(26) Not available with Housing code 00, 01, 5A, or 7J. Available with Intrinsically Safe approvals only. For FM Intrinsically Safe, Division 2 (option code I5) or FM FISCO Intrinsically Safe (option code IE), install in accordance with Rosemount drawing 03151-1009 to maintain outdoor rating (NEMA 4X and IP66).

Rosemount 3051S Liquid Level Transmitter

Select either FF diaphragm seal type (see "Flush Flanged Seal" on page 53) or for EF diaphragm seal type (see "Extended Flanged Seal" on page 54) and then finish this selection by choosing transmitter options.

Model	Transmitter Type		
3051S	Liquid Level Transmitter		
Code	**Performance Class**		
1[1]	Ultra: 0.065% span accuracy, 100:1 rangedown, 12-year limited warranty		
2	Classic: 0.065% span accuracy, 100:1 rangedown		
Code	**Connection Type**		
L	Level		
Code	**Measurement Type**		
D	Differential		
G	Gage		
A	Absolute		
Code	**Pressure Range**		
	Differential (LD)	**Gage (LG)**	**Absolute (LA)**
1A	-25 to 25 inH_2O (-62,2 to 62,2 mbar)	-25 to 25 inH_2O (-62,2 to 62,2 mbar)	0 to 30 psia (2,1 bar)
2A	-250 to 250 inH_2O (-623 to 623 mbar)	-250 to 250 inH_2O (-623 to 623 mbar)	0 to 150 psia (10 bar)
3A	-1000 to 1000 inH_2O (-2,5 to 2,5 bar)	-393 to 1000 inH_2O (-0,98 to 2,5 bar)	0 to 800 psia (55 bar)
4A	-300 to 300 psi (-20,7 to 20,7 bar)	-14.2 to 300 psig (-0,98 to 21 bar)	0 to 4000 psia (276 bar)
5A	-2000 to 2000 psi (-137,9 to 137,9 bar)	-14.2 to 2000 psig (-0,98 to 137,9 bar)	N/A
Code	**Output[2]**		
A	4-20 mA with digital signal based on HART protocol		
F[3]	FOUNDATION fieldbus protocol		
X[4]	Wireless (Requires wireless options and wireless housing 5A)		
Code	**Housing Style**	**Material[5]**	**Conduit Entry**
00	None (SuperModule Platform only, no housing included)		
01[6]	Assemble to Rosemount 753R Web-Based Monitoring Indicator		
1A	PlantWeb housing	Aluminum	1/2–14 NPT
1B	PlantWeb housing	Aluminum	M20 x 1.5 (CM20)
1C	PlantWeb housing	Aluminum	G1/2
1J	PlantWeb housing	SST	1/2–14 NPT
1K	PlantWeb housing	SST	M20 x 1.5 (CM20)
1L	PlantWeb housing	SST	G1/2
5A	Wireless PlantWeb housing	Aluminum	1/2–14 NPT
5J	Wireless PlantWeb housing	SST	1/2–14 NPT
2A	Junction Box housing	Aluminum	1/2–14 NPT
2B	Junction Box housing	Aluminum	M20 x 1.5 (CM20)
2C	Junction Box housing	Aluminum	G1/2
2J	Junction Box housing	SST	1/2–14 NPT
2E	Junction Box with output for remote interface	Aluminum	1/2–14 NPT
2F	Junction Box with output for remote interface	Aluminum	M20 x 1.5 (CM20)
2G	Junction Box with output for remote interface	Aluminum	G1/2
2M	Junction Box with output for remote interface	SST	1/2–14 NPT
7J[7]	Quick Connect (A size Mini, 4-pin male termination)	SST	
Code	**Seal System Type**		
1	Direct-mount diaphragm seal system		
Code	**High Pressure Side Extension (between transmitter flange and seal)**		
0	Direct-mount (No extension)		
Code	**Low Pressure Side Connection (sensor module)**		
1	One capillary connection remote diaphragm seal (see Rosemount 1199 ordering table for seal information)		
2	316L SST isolator / SST transmitter flange		
3	Alloy C-276 isolator / SST transmitter flange		
Code	**Capillary Length**		
0	N/A		
Code	**Diaphragm Seal Fill Fluid**		
A	*Syltherm* XLT		
C	D. C. Silicone 704		
D	D. C. Silicone 200		
H	Inert (Halocarbon)		
G	Glycerine and Water		
N	*Neobee M-20*		
P	Propylene Glycol and Water		

Next, select either Flush Flanged (FF) diaphragm seal (see page 53) or Extended Flanged (EF) diaphragm seal (see page 54).

Seal Options (page 53—54)

Flush Flanged Seal

Code	Process Connection Style	
FF	Flush Flanged, Ra 125-250 gasket surface	
Code	**Diaphragm Seal Size (High Side)**	
G	2-in./DN 50	
7	3-in.	
J	DN 80	
9	4-in./DN 100	
Code	**Flange Rating (High Side)**	
1	Class 150	
2	Class 300	
4	Class 600	
G	PN 40	
E	PN 10/16; available with 4 in. DN 100 only	
Code	**Isolator Material**	**Flange Material (High Side)**
CA	316L SST	CS
DA	316L SST	SST
CB	Alloy C-276	CS
DB	Alloy C-276	SST
CC	Tantalum - seam welded(8)	CS
DC	Tantalum - seam welded(8)	SST
Code	**Lower Housing Material (High Side)(9)**	
0	None	
A	316 SST	
B	Alloy C-276	
Code	**Flushing Connection Quantity and Size (Lower Housing, High Side)**	
0	None	
1	1 (1/4-in.)	
3	2 (1/4-in.)	
7	1 (1/2-in.)	
9	2 (1/2-in.)	
Code	**Seal Options: Flushing Connections**	
SD	Alloy C-276 Plug in Flushing Connection	
SG	316 SST Plug in Flushing Connection	
SH	316 SST Vent/Drain Valve in Flushing Connection	
Code	**Seal Options: Gaskets**	
SJ	PTFE gasket for lower housing	
SK	Gylon gasket for lower housing	
SN	*Grafoil*™ gasket for lower housing	
Code	**Other Options**	
ST(10)	Materials per NACE MR0175/ISO 15156, MR0103	

Continue with transmitter options on page 54

(1) Not available with Wireless Operating Frequency and Protocol option codes 1 or 2.

(2) For spare SuperModule Platforms, select output code A.

(3) Requires PlantWeb housing.

(4) Available approvals are FM Intrinsically Safe, Division 2 (option code I5), CSA Intrinsically Safe (option code I6), ATEX Intrinsic Safety (option code I1; only available with 2.4 GHz), and IECEx Intrinsic Safety (option code I7; only available with 2.4 GHz).

(5) Material specified is cast as follows: CF-3M is the cast version of 316L SST. For housing, material is aluminum with polyurethane paint.

(6) Available with output code A only. Not available with approvals. See Rosemount 753R Product Data Sheet, 00813-0100-4379, to specify Web-Based Monitoring Indicator. Does not integrate into plant host systems.

(7) Available with output code A only. Available approvals are FM Intrinsically Safe, Division 2 (option code I5), ATEX Intrinsic Safety (option code I1), or IECEx Intrinsic Safety (option code I7). Contact an Emerson Process Management representative for additional information.

(8) Not recommended for use with spiral wound metallic gaskets (see 1199 product data sheet, document 00813-0100-4016 for additional options).

(9) Standard gasket for lower housing consists of non-asbestos fiber.

(10) Materials of Construction comply with metallurgical requirements highlighted within NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments.

Extended Flanged Seal

Code	Process Connection Style	
EF	Extended flanged, Ra 125-250 gasket surface	
Code	**Diaphragm Seal Size (High Side)**	
7	3-in./DN 80, 2.58-in. diaphragm	
9	4-in./DN 100, 3.5-in. diaphragm	
Code	**Flange Rating (High Side)**	
1	Class 150	
2	Class 300	
4	Class 600	
G	PN 40	
E	PN 10/16; available with 4 in. DN 100 only	
Code	**Isolator Material and Extension Material**	**Flange Material (High Side)**
CA	316L SST	CS
DA	316L SST	SST
CB	Alloy C-276 / Cast C-276	CS
DB	Alloy C-276 / Cast C-276	SST
Code	**Extension Length (High Side, 1st Position)**	
2	2-in./50 mm	
4	4-in./100 mm	
6	6-in./150 mm	
Code	**Extension Length (High Side, 2nd Position)**	
0	0-in./0 mm	

Continue with transmitter options below

Transmitter Options continued from page 52

(— = Not Applicable • = Applicable)

Code	Options
PlantWeb Control Functionality	
A01[1]	FOUNDATION fieldbus Advanced Control Function Block Suite
PlantWeb Diagnostic Functionality	
D01[1]	FOUNDATION fieldbus Diagnostics Suite
DA1[2]	HART Diagnostics Suite
Code	**Wireless Options - Select code from each wireless category (example: WA2WK1)**
Wireless Burst Rate	
WA	User Configurable Burst Rate
Operating Frequency and Protocol	
1	2.4 GHz DSSS, HART
2	900 MHz FHSS, HART
3	2.4 GHz DSSS, WirelessHART
Omnidirectional Wireless Antenna	
WK	Long Range, Integral Antenna
SmartPower™	
1	Long-life Power Module Adapter, Intrinsically Safe NOTE: Long-life Power Module must be shipped separately, order Part No. 00753-9220-0001.
Code	**Options**
Special Configuration (Software)	
C1[3]	Custom software configuration *Note: A Configuration Data Sheet must be completed, see document number 00806-0100-4801 for HART and 00806-0100-4802 for wireless.*
C3	Gage pressure calibration on Rosemount 3051S_LA4 only
C4[3][4]	NAMUR alarm and saturation levels, high alarm
C5[3][4]	NAMUR alarm and saturation levels, low alarm
C6[3][4]	Custom alarm and saturation signal levels, high alarm *Note: Requires option code C1, custom software configuration. A Configuration Data Sheet must be completed, see document number 00806-0100-4801.*

C7[3][4]	Custom alarm and saturation signal levels, low alarm *Note: Requires option code C1, custom software configuration. A Configuration Data Sheet must be completed, see document number 00806-0100-4801.*			
C8[3][4]	Low alarm (standard Rosemount alarm and saturation levels)			
Special Configuration (hardware)		**LD**	**LG**	**LA**
D1[3][4]	Hardware adjustments (zero, span, alarm, security) *Note: Not available with fieldbus protocol or Housing Style codes 00, 01, 2E, 2F, 2G, 2M, 5A, or 7J.*	•	•	•
D2	1/2-14 NPT process connections process adapters	•	—	—
D4	External ground screw assembly	•	•	•
D5	Delete transmitter drain/vent valves (install plugs)	•	—	—
D8	Ceramic drain/vent valves	•	—	—
D9	RC 1/2 process connections (process adapters)	•	—	—
Product Certifications[5]				
E1	ATEX Flameproof			
I1	ATEX Intrinsic Safety			
IA	ATEX FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only			
N1	ATEX Type n			
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)			
ND	ATEX Dust			
E4	TIIS Flameproof			
E5	FM Explosion-proof, Dust Ignition-proof			
I5	FM Intrinsically Safe, Division 2			
IE	FM FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only			
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5 and I5)			
E6	CSA Explosion-proof, Dust Ignition-proof, Division 2			
I6	CSA Intrinsically Safe			
IF	CSA FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only			
K6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E6 and I6)			
D3[6]	Measurement Canada Accuracy Approval			
E7	IECEx Flameproof, Dust Ignition-proof			
I7	IECEx Intrinsic Safety			
IG	IECEx FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only			
N7	IECEx Type n			
K7	IECEx Flameproof, Dust Ignition-proof, Intrinsic Safety, Type n (combination of E7, I7, and N7)			
E2	INMETRO Flameproof			
I2	INMETRO Intrinsic Safety			
K2	INMETRO Flameproof, Intrinsic Safety			
E3[7]	China Flameproof			
I3[7]	China Intrinsic Safety			
KA	ATEX and CSA Flameproof, Intrinsically Safe, Division 2 (combination of E1, E6, I1, and I6) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*			
KB	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5, E6, I5, and I6) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*			
KC	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination of E5, E1, I5, and I1) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*			
KD	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of E5, E6, E1, I5, I6, and I1) *Note: Only available on Housing Style codes 00, IA, IJ, 2A, 2J, 2E, or 2M.*			
Alternate Materials of Construction				
L1	Inert sensor fill fluid (differential and gage only) *Note: Silicone fill fluid is standard.*			
L2	Graphite-filled PTFE o-ring			
L4	Austenitic 316 SST bolts			
L5[8]	ASTM A193, Grade B7M bolts			
L6	Alloy K-500 bolts			
L7[8]	ASTM A453, Class D, Grade 660 bolts			
L8	ASTM A193, Class 2, Grade B8M bolts			
Digital Display[9]				
M5	PlantWeb LCD Display			
M7[4][10]	Remote mount LCD display and interface, no cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output *Note: See the 3051S Reference Manual (document number 00809-0100-4801) for cable requirements.* *Contact an Emerson Process Management representative for additional information.*			
M8[4][10][11]	Remote mount LCD display and interface, 50 ft. (15 m) cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output			

M9[4][10][11]	Remote mount LCD display and interface, 100 ft. (31 m) cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output
Special Procedures	
P1	Hydrostatic testing with certificate
P2	Cleaning for special services
P3	Cleaning for less than 1PPM chlorine/fluorine
Special Certifications	
Q4	Calibration certificate
QP	Calibration certificate and tamper evident seal
Q8	Material traceability certification per EN 10204 3.1.B
QS[3][4]	Prior-use certificate of FMEDA Data
QT[12]	Safety-certified to IEC 61508 with certificate of FMEDA data
QZ	Remote Seal System Performance Calculation Report
Terminal blocks	
T1[13]	Transient terminal block
T2[14]	Terminal block with WAGO® spring clamp terminals
T3[14]	Transient terminal block with WAGO spring clamp terminals
Conduit Electrical Connector	
GE[15]	M12, 4-pin, Male Connector (*eurofast*®)
GM[15]	A size Mini, 4-pin, Male Connector (*minifast*®)

Typical Model Number for FF seal:	**3051S2LD**	**2A**	**A**	**1A**	**1**	**0**	**2**	**0**	**D**	**FF**	**7**	**1**	**DA**	**0**	**0**
Typical Model Number for EF seal:	**3051S2LD**	**2A**	**A**	**1A**	**1**	**0**	**2**	**0**	**D**	**EF**	**7**	**1**	**DA**	**2**	**0**

(1) Requires PlantWeb housing and output code F.

(2) Requires PlantWeb housing and output code A. Includes Hardware Adjustments as standard. Not available with option code QT.

(3) Not available with output code F or Housing code 01.

(4) Not available with output code X.

(5) Valid when SuperModule Platform and housing have equivalent approvals.

(6) Requires PlantWeb housing and Hardware Adjustments option code D1. Limited availability depending on transmitter type and range. Contact an Emerson Process Management representative for additional information.

(7) Contact an Emerson Process Management representative for availability.

(8) Materials of Construction comply with metallurgical requirements highlighted within NACE MR0175/ISO 15156 for sour oil field production environments. Environmental limits apply to certain materials. Consult latest standard for details. Selected materials also conform to NACE MR0103 for sour refining environments.

(9) Not available with Housing Code 01 or 7J.

(10) Not available with output code F, Housing code 01, option code DA1, or option code QT.

(11) Cable supplied is Belden 3084A, rated for ambient temperatures up to 167°F (75°C).

(12) Not available with output code F or X. Not available with housing code 01 or 7J.

(13) Not available with Housing code 00, 01, 5A, or 7J.

(14) Available with output code A and PlantWeb housing only.

(15) Not available with Housing code 00, 01, 5A, or 7J. Available with Intrinsically Safe approvals only. For FM Intrinsically Safe, Division 2 (option code I5) or FM FISCO Intrinsically Safe (option code IE), install in accordance with Rosemount drawing 03151-1009 to maintain outdoor rating (NEMA 4X and IP66).

Rosemount 300S MultiVariable Transmitter Housing Kit

Model			
300SMV	Housing Kit for Rosemount 3051S MultiVariable Transmitter		
Code	**MultiVariable Type**		
M	MultiVariable Measurement with Fully Compensated Mass and Energy Flow		
P	MultiVariable Measurement with Direct Process Variable Output		
Code	**Temperature Input**		
N	None		
R(1)	RTD Input (Type Pt 100, -328 to 1562 °F (-200 to 850 °C))		
Code	**Transmitter Output**		
A	4–20 mA with digital signal based on HART protocol		
Code	**Housing Style**	**Material(2)**	**Conduit Entry**
1A	PlantWeb housing	Aluminum	1/2–14 NPT
1B	PlantWeb housing	Aluminum	M20 x 1.5 (CM20)
1C	PlantWeb housing	Aluminum	G1/2
1J	PlantWeb housing	SST	1/2–14 NPT
1K	PlantWeb housing	SST	M20 x 1.5 (CM20)
1L	PlantWeb housing	SST	G 1/2
Code	**Options**		
RTD Cable (RTD Sensor must be ordered separately)			
C12	RTD Input with 12 ft. (3.66 m) of Shielded Cable		
C13	RTD Input with 24 ft. (7.32 m) of Shielded Cable		
C14	RTD Input with 75 ft. (22.86 m) of Shielded Cable		
C20(3)	RTD Input with 27 in. (69 cm) of Armored Shielded Cable		
C21	RTD Input with 4 ft. (1.22 m) of Armored Shielded Cable		
C22	RTD Input with 12 ft. (3.66 m) of Armored Shielded Cable		
C23	RTD Input with 24 ft. (7.32 m) of Armored Shielded Cable		
C24	RTD Input with 75 ft. (22.86 m) of Armored Shielded Cable		
C30(3)	RTD Input with 25 in. (64 cm) of ATEX/IECEx Flameproof Cable		
C32	RTD Input with 12 ft. (3.66 m) of ATEX/IECEx Flameproof Cable		
C33	RTD Input with 24 ft. (7.32 m) of ATEX/IECEx Flameproof Cable		
C34	RTD Input with 75 ft. (22.86 m) of ATEX/IECEx Flameproof Cable		
C40(3)	RTD Input with 34 in. (86.36 cm) Shielded Cable and 24 in. (60.96 cm) FM Approved Coupling Flex		
C41(3)	RTD Input with 40 in. (101.60 cm) Shielded Cable and 30 in. (76.20 cm) FM Approved Coupling Flex		
Software Configuration			
C1(4)	Custom software configuration *Note: A Configuration Data Sheet must be completed, see document number 00806-0100-4803.*		
C2(4)	Custom flow configuration *Note: A Custom Fluid Data Sheet must be completed, see document number 00806-0200-4803.*		
Alarm Limit			
C4	NAMUR alarm and saturation levels, high alarm		
C5	NAMUR alarm and saturation levels, low alarm		
C6(4)	Custom alarm and saturation signal levels, high alarm		
C7(4)	Custom alarm and saturation signal levels, low alarm		
C8	Low alarm (standard Rosemount alarm and saturation levels)		
External Ground Screw Assembly			
D4	External Ground Screw Assembly		
Product Certifications			
E1	ATEX Flameproof		
I1	ATEX Intrinsic Safety		
N1	ATEX Type n		
ND	ATEX Dust		
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)		
E4	TIIS Flameproof		
I4	TIIS Intrinsic Safety		
K4	TIIS Flameproof and Intrinsic Safety (combination E4 and I4)		
E5	FM Explosion-proof, Dust Ignition-proof		

I5	FM Intrinsically Safe, Division 2
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5 and I5)
E6	CSA Explosion-proof, Dust Ignition-proof, Division 2
I6	CSA Intrinsically Safe
K6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E6 and I6)
E7	IECEx Flameproof, Dust Ignition-proof
I7	IECEx Intrinsic Safety
N7	IECEx Type n
K7	IECEx Flameproof, Dust Ignition-proof, Intrinsic Safety, Type n (combination of E7, I7, and N7)
E2(4)	INMETRO Flameproof
I2(4)	INMETRO Intrinsic Safety
K2(4)	INMETRO Flameproof, Intrinsic Safety (combination of E2 and I2)
E3(4)	China Flameproof
I3(4)	China Intrinsic Safety
KA(5)	ATEX and CSA Explosion-proof, Intrinsically Safe, Division 2 (combination of E1, E6, I1, and I6)
KB	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5, E6, I5, and I6)
KC(5)	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination of E5, E1, I5, and I1)
KD(5)	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of E5, E6, E1, I5, I6, and I1)
Digital Display	
M5	PlantWeb LCD Display
Calibration Data Certification	
Q4(4)(6)	Calibration Certificate
QP(4)	Calibration Certificate and Tamper Evident Seal
Terminal Blocks	
T1	Transient terminal block
Conduit Electrical Connector	
GE(7)	M12, 4-pin, Male Connector (*eurofast*®)
GM(7)	A size Mini, 4-pin, Male Connector (*minifast*®)

Typical Model Number: 300SMV M R 1A C22 M5

(1) RTD Sensor must be ordered separately.

(2) Material specified is cast as follows: CF-8M is the cast version of 316 SST, CF-3M is the cast version of 316L SST, CW-12MW is the cast version of Alloy C-276, M-30C is the cast version of Alloy 400. For housing, material is aluminum with polyurethane paint.

(3) For use with Flowmeters with integral RTDs.

(4) Contact an Emerson Process Management representative for availability.

(5) RTD cable not available with this option.

(6) Calibration certificate only provides data for process temperature RTD interface.

(7) Available with Intrinsically Safe approvals only. For FM Intrinsically Safe, Non-Incendive approval (option code I5), install in accordance with Rosemount drawing 03151-1206 to maintain outdoor rating (NEMA 4X and IP66).

Rosemount 300S Series Housing Kit

Model			
300S	Housing Kit for Rosemount 3051S Coplanar, In-Line, and Liquid Level Transmitters		
Code	**Housing Style**	**Material(1)**	**Conduit Entry**
1A	PlantWeb housing	Aluminum	1/2–14 NPT
1B	PlantWeb housing	Aluminum	M20 x 1.5 (CM20)
1C	PlantWeb housing	Aluminum	G1/2
1J	PlantWeb housing	SST	1/2–14 NPT
1K	PlantWeb housing	SST	M20 x 1.5 (CM20)
1L	PlantWeb housing	SST	G 1/2
2A	Junction Box housing	Aluminum	1/2–14 NPT
2B	Junction Box housing	Aluminum	M20 x 1.5 (CM20)
2C	Junction Box housing	Aluminum	G1/2
2J	Junction Box housing	SST	1/2–14 NPT
2E	Junction Box housing with output for remote interface	Aluminum	1/2–14 NPT
2F	Junction Box housing with output for remote interface	Aluminum	M20 x 1.5 (CM20)
2G	Junction Box housing with output for remote interface	Aluminum	G1/2
2M	Junction Box housing with output for remote interface	SST	1/2–14 NPT
3A	Remote mount display and interface housing	Aluminum	1/2–14 NPT
3B	Remote mount display and interface housing	Aluminum	M20 x 1.5 (CM20)
3C	Remote mount display and interface housing	Aluminum	G1/2
3J	Remote mount display and interface housing	SST	1/2–14 NPT
7J(2)	Quick Connect (A size Mini, 4-pin male termination)	SST	
Code	**Output**		
A	4-20 mA with digital signal based on HART protocol		
F(3)	FOUNDATION fieldbus protocol		
Code	**Options**		
PlantWeb Control Functionality			
A01(4)	FOUNDATION fieldbus Advanced Control Function Block Suite		
PlantWeb Diagnostic Functionality			
D01(4)	FOUNDATION fieldbus Diagnostics Suite		
DA1(5)	HART Diagnostics Suite		
Special Configuration (Hardware)			
D1(6)	Hardware adjustments (zero, span, alarm, security) *Note: Not available with Housing Style codes 2E, 2F, 2G, 2M, 3A, 3B, 3C, 3J, or 7J.*		
Product Certifications			
E1	ATEX Flameproof		
I1	ATEX Intrinsic Safety		
IA	ATEX FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only		
N1	ATEX Type n		
K1	ATEX Flameproof, Intrinsic Safety, Type n, Dust (combination of E1, I1, N1, and ND)		
ND	ATEX Dust		
E5	FM Explosion-proof, Dust Ignition-proof		
I5	FM Intrinsically Safe, Division 2		
IE	FM FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only		
K5	FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5 and I5)		
E6	CSA Explosion-proof, Dust Ignition-proof, Division 2		
I6	CSA Intrinsically Safe		
IF	CSA FISCO Intrinsically Safe; for FOUNDATION fieldbus protocol only		
K6	CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E6 and I6)		
E7	IECEx Flameproof, Dust Ignition-proof		
I7	IECEx Intrinsic Safety		
IG	IECEx FISCO Intrinsic Safety; for FOUNDATION fieldbus protocol only		
N7	IECEx Type n		
K7	IECEx Flameproof, Dust Ignition-proof, Intrinsic Safety, Type n (combination of E7, I7, and N7)		
E2	INMETRO Flameproof		
I2	INMETRO Intrinsic Safety		

K2	INMETRO Flameproof, Intrinsic Safety
KA	ATEX and CSA Flameproof, Intrinsically Safe, Division 2 (combination of E1, E6, I1, and I6) *Note: Only available on Housing Style codes IA, IJ, 2A, 2J, 2E, 2M, 3A, or 3J.*
KB	FM and CSA Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2 (combination of E5, E6, I5, and I6) *Note: Only available on Housing Style codes IA, IJ, 2A, 2J, 2E, 2M, 3A, or 3J.*
KC	FM and ATEX Explosion-proof, Intrinsically Safe, Division 2 (combination of E5, E1, I5, and I1) *Note: Only available on Housing Style codes IA, IJ, 2A, 2J, 2E, 2M, 3A, or 3J.*
KD	FM, CSA, and ATEX Explosion-proof, Intrinsically Safe (combination of E5, E6, E1, I5, I6, and I1) *Note: Only available on Housing Style codes IA, IJ, 2A, 2J, 2E, 2M, 3A, or 3J.*
Digital Display(7)	
M5	PlantWeb LCD Display
M7(8)	Remote mount LCD display and interface, no cable; PlantWeb housing, SST bracket, requires 4-20 mA / HART output *Note: See the 3051S Reference Manual (document number 00809-0100-4801) for cable requirements.* *Contact an Emerson Process Management representative for additional information.*
M8(8)(9)	Remote mount LCD display and interface, 50 ft. (15 m) cable; SST bracket, requires 4-20 mA / HART output
M9(8)(9)	Remote mount LCD display and interface, 100 ft. (31 m) cable; SST bracket, requires 4-20 mA / HART output
Terminal Blocks	
T1(10)	Transient terminal block
T2(11)	Terminal block with WAGO® spring clamp terminals
T3(11)	Transient terminal block with WAGO spring clamp terminals
Conduit Electrical Connector	
GE(12)	M12, 4-pin, Male Connector (*eurofast*®)
GM(12)	A size Mini, 4-pin, Male Connector (*minifast*®)

Typical Model Number: 300S 1A A E5

(1) Material specified is cast as follows: CF-3M is the cast version of 316L SST. For housing, material is aluminum with polyurethane paint.

(2) Available with output code A only. Not available with approvals. Contact an Emerson Process Management representative for additional information.

(3) Requires PlantWeb housing.

(4) Requires PlantWeb housing and output code F.

(5) Requires PlantWeb housing and output code A. Includes Hardware Adjustments as standard.

(6) Not available with output code F.

(7) Not available with Housing code 7J.

(8) Not available with output code F or option code DA1. Only available on Housing Style codes 3A, 3B, 3C, or 3J.

(9) Cable supplied is Belden 3084A, rated for ambient temperatures up to 167°F (75°C).

(10) Not available with Housing code 3A, 3B, 3C, 3J, or 7J.

(11) Available with output code A and PlantWeb housing only.

(12) Not available with Housing code 7J. Available with Intrinsically Safe approvals only. For FM Intrinsically Safe, Division 2 (option code I5) or FM FISCO Intrinsically Safe (option code IE), install in accordance with Rosemount drawing 03151-1009 to maintain outdoor rating (NEMA 4X and IP66).

ACCESSORIES

Rosemount Engineering Assistant (EA) Software Packages

The Rosemount Engineering Assistant software supports flow configuration for the 3051S MultiVariable and 3051S FOUNDATION fieldbus. The package is available with or without modem and connecting cables. All configurations are packaged separately.

For best performance of the EA Software, the following computer hardware and software is recommended:

- Pentium, 800MHz personal computer or above
- 512 MB RAM
- 350 MB of available hard disk space
- Microsoft ® Windows™ 2000 or XP Professional

Engineering Assistant Software Packages

Code	Product Description
EA	Engineering Assistant Software Program
Code	**Software Media**
2	EA Rev. 5 (Compatible with 3095, 3051S FOUNDATION fieldbus, and 333)
3	EA Rev. 6 (Compatible with 3051SMV only)
Code	**Language**
E	English
Code	**Modem and Connecting Cables**
O	None
H	Serial Port HART Modem and Cables
B	USB Port HART Modem and Cables
C	FOUNDATION fieldbus PCM-CIA Interface Card and Cables
Code	**License**
N1	Single PC license
N2	Site license
Typical Model Number:	**EA 2 E O N1**

Accessories

Item Description	Part Number
Serial Port HART Modem and Cables Only	03095-5105-0001
USB Port HART Modem and Cables Only(1)	03095-5105-0002
FOUNDATION fieldbus PCM-CIA Interface Card and Cables Only	03095-5108-0001
Long-life Power Module for Wireless option	00753-9220-0001

(1) Supported by Snap-On EA with AMS Device Manager version 6.2 or higher.

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